Lecture
ON
CRANIAL AND INTRACRANIAL INJURIES.

Delivered at the Royal College of Surgeons of England,

BY THOMAS BRYANT, F.R.C.S. ENG.,
HUNTERIAN PROFESSOR OF SURGERY AND PATHOLOGY, ROYAL COLLEGE OF SURGEONS.

LECTURE III.

(*Concluded from page 408.*)

UP to this time my observations have been confined to the elucidation of the first of the two main clinical points which have had a common bearing upon all cranial injuries, and to which I drew your attention at an early period of this lecture—namely, "that all injuries of the head should be estimated *primarily* with reference to the amount of damage the cranial contents have sustained"; and I trust I have demonstrated with sufficient clearness that a cerebral injury of some kind is the one common factor. I propose now, therefore, to pass on and consider the treatment of cranial and intra-cranial injuries, and, with the light which the above conclusion throws upon the whole subject, see what bearing it ought to have upon the second clinical point to which attention has been drawn—viz., "that injuries of the head should be estimated *secondarily* with reference to the risk of the cranial contents becoming involved"; and it should be remembered that this risk is one to which every degree and variety of cranial injury is liable. In even such an apparently simple accident as a contusion of the head, whether with or without a scalp wound, the fear of this secondary danger ought not to be overlooked; indeed, it ought always to be held in view, for I imagine there are but few surgeons who have not been called upon to treat examples of scalp wounds, or patients who, having had cranial blows and being supposed to have been cured, have, on going to work or moving about, or after some indiscretion of diet, complained of headache, restlessness, giddiness, nausea, or even vomiting, with more or less febrile disturbance—all these symptoms being those of cerebral irritation, or the first step of inflammation. Or possibly the patient has complained only of local pain at the seat of injury, and the surgeon on examination finds some swelling of the soft parts over the bone or some change in the appearance of the wound, its healthy granulating surface having assumed a pale, flabby condition, always suggestive of an early ostitis or periostitis. "Acceleration or hardness of pulse," wrote Percival Pott, "restlessness, anxiety, and any degree of fever, after a smart blow on the head, are always to be suspected and attended to. ..... When there is a wound, it will for a time have the same appearance as a simple wound. But after a few days all these favourable appearances will vanish; the sore will lose its florid complexion and granulated surface, and become pale, glassy, and flabby; instead of good matter, it will discharge only a thin discoloured sanies, and the pericranium will separate from the bone. The first appearance of alteration in the wound immediately succeeds the febrile attack, and as the febrile symptoms increase the sore becomes worse and worse. ..... Through the whole time, from the first attack of the fever to the last and fatal period, an attentive observer will remark the gradual alteration of the colour of the bone, if it be bare. At first it will be found to be whiter and more dry than the natural one, and as the symptoms increase the bone inclines more and more to a kind of purulent hue or whitish colour." These extracts I have taken from the works of Percival Pott, who first drew attention to this danger of bone inflammation as a result of cranial injury a century ago, but possibly made too much of it. He regarded it as the chief element of danger in all cases of contusion, scalp wound, or fracture, and not only trephined the skull when ostitis existed, but laid it down as a rule that "perforation of the skull is absolutely necessary in seven cases out of ten of simple undepressed fracture." The operation for trepanning was called for in these simple cases "to *prevent* the effects of inflammation, detachment, and suppuration of the dura mater, and consequently the collection of matter between it and the skull." From this over-estimate of the value and necessity of the operation of trephining in cases of fracture, and the comparative rarity of cases of abscess between the bone and dura mater as a direct result of contusion, surgeons have been prone to treat too lightly the risks of a secondary ostitis following bone injury, whether complicated or not with scalp wound or even with fracture, and consequently to neglect what was good in Pott's teaching. As a result, I feel sure that many lives are lost yearly, and that many narrow escapes from death occur. I have the notes of some fatal cases of the kind before me which I have taken from the post-mortem records of Guy's Hospital. In four of these pyæmia was the immediate cause of death, and such a result was probably brought about by the inflammation of the venous channels of the diploë of the injured bone. I will not weary you by reading all the details of the cases, but will lay before you their chief points.

CASE 13. *Scalp wound; ostitis; necrosis; pyæmia.*—T. G——, a man aged twenty-two, having fallen from a height, came into Guy's Hospital with a scalp wound and a compound fracture of his leg; he died from pyæmia. The scalp wound had apparently healed, and the man with his compound fracture seemed doing well in all ways, when on the tenth day headache and febrile disturbance appeared, followed by swelling in the seat of cranial injury, reopening of the wound, and suppuration of the parts covering the bone, from which the pericranium had loosened. Indications of pyæmia soon appeared, but no general head symptoms, and he died in two weeks. At the necropsy, the anterior half of the parietal bone beneath the scalp wound was of a whitish colour, bare for a space of three by two inches, and apparently dead. The necrosis extended through the bone, and on the surface of the dura mater beneath the bone there was lymph with pus, as also on the arachnoid surface. The brain was healthy. There were pyæmic abscesses about the body.

CASE 14. *Scalp wound; ostitis and necrosis of the injured bone; meningitis; pyæmia.*—Eliza S——, aged forty, came into Guy's Hospital with a large scalp wound over the right parietal region, and exposed bone. The injury was the result of a fall off an omnibus, which for a few minutes stunned her. The next day she complained of headache, and on the fourth day it was incessant. On the ninth day sleeplessness and indications of fever appeared; the wound also became unhealthy. On the twenty-first day there were rigors, and on the twenty-fifth some hemiplegia on the left side, for which the operation of trephining of the right parietal bone was performed, and some fetid pus evacuated from beneath the bone. The dura mater beneath the bone was velvety. Convulsions soon came on, and death in a week. At the necropsy, the whole thickness of the right or injured parietal bone was found to be dead, and the dura mater beneath discoloured. The surface of the brain corresponding to the dead bone was covered with pus. Pyæmic abscesses were present in the lungs and liver.

CASE 15. *Scalp wound; ostitis of the external table; fracture of the inner table; pyæmia.*—Edw. N——, aged eighteen, having received a scalp wound to the right of the vertex of his skull from a falling bucket, came to Guy's Hospital without any head symptoms, and had his head dressed. The wound healed rapidly without pain or trouble in about ten days, when some local swelling appeared, followed in two days by fever and rigors. In this condition he was admitted into the hospital, where pain and swelling of the right elbow joint appeared, and later on chest symptoms, which proved fatal three months after the primary accident. After death, the outer shell of the parietal bone beneath the scalp wound, to the extent of an inch and a half by one inch, was necrosed, but it had not been fractured. The inner surface of the corresponding area of bone was fractured, the fracture lying in the long axis of the oval necrosed piece. The fracture was a mere fissure, slightly starred, and its edges were perceptibly raised. A little stringy lymph hung about the bone. Over the dura mater corresponding to the fractured bone there was a yellowish patch of lymph. The brain was healthy. There were pyæmic abscesses in the lungs, liver, and elbow.

CASE 16. *Scalp wound; exposed and inflamed bone; death from bronchitis.*—A man, aged twenty-three, having been jerked off the shaft of a cart, received a blow and a wound over his left temple which exposed the bone. There were no head

symptoms. The wound was carefully dressed antiseptically, and for a week everything went on well. At the end of that time his temperature went up to 104·6°, and the glands of his neck commenced to enlarge. On the tenth day he had paralysis of the left facial nerve, and bronchitis set in, which quickly destroyed the patient, three weeks after the injury. At the post-mortem examination, two square inches of the left or injured temporal bone were exposed. The bone was dry and discoloured, but there was no obvious necrosis. The diploë of the bone in the line of section of the calvaria on the left side was more vascular than that on the right side. The brain and dura mater were healthy. The bronchial tubes were filled with viscid mucus. The other organs were healthy.

CASE 17. *Scalp wound; necrosis of bone; abscess in the brain.*—A male child, aged three, six weeks before death fell on his forehead, causing a wound one inch above the left orbit. No head symptoms were induced by the fall, and for three days all seemed to be well, when he fainted in his mother's arms. He was then brought to Guy's Hospital, and requested to be left; but to this the mother objected. A few days later the child again fainted and vomited, and as the vomiting persisted the mother brought her child into the hospital. At that time, sixteen days after the accident, the wound had healed, and the scar was adherent to the bone. The child vomited daily, and his temperature was just above normal. A week later, without any important change in the symptoms, the child had a fit which lasted an hour. During the fit the right leg was rigid, and the arm with the fingers and thumb became spasmodically flexed. The left limbs also moved spasmodically. Temperature 106°. In two days the child died. After death the frontal bone at the seat of injury was covered with purulent lymph beneath the pericranium. Beneath this the bone was rough and ulcerated. The inner table over a space the size of a sixpence was opaque yellow. When sawn through, a piece of the outer table was loose and necrosed. The dura mater at this spot was adherent to the brain. There was a little pus on its outer surface. The left frontal lobe of the brain beneath this spot was soft, swollen, and fluctuating, and when cut into was found to contain a large abscess of the size of an apricot, which had a distinct lining membrane. There was no red softening.

CASE 18. *Scalp wound; necrosis of bone; abscess of the brain.*—A middle-aged woman three weeks before her admission into Guy's Hospital received a scalp wound from a blow upon the forehead. She continued at her work for two weeks, and it is said without any head symptoms, when she became comatose and died in a week. She was brought to the hospital in the dying comatose stage. At the post-mortem examination a sloughing wound was found to occupy the centre of her forehead, and beneath it bone was exposed. The surface of the bone was yellow and dead, but not depressed. The area of dead bone was separated from the living by a shallow groove. The inner surface of the bone was blackish; the diploë was full of pus. There was chocolate-coloured pus beneath the dura mater of the injured part, and the brain beneath was suppurating, the abscess burrowing backwards.

CASE 19. *Contusion of cranium; Pott's "puffy" tumour; trephining; meningitis; death; bruised brain.*—W. L——, aged forty-six, was admitted into Guy's Hospital, under the care of Mr. Howse, on Dec. 13th, 1882, fifteen days after having been knocked down by a cab and stunned. He was taken home after the accident, unconscious, and remained in that state for three hours. He then vomited and brought up blood. The next day he became drowsy; and four days later he had a convulsion, which was followed by others for three days. He then became delirious and unconscious. When admitted he was in a low typhoid state, constantly muttering and picking at the bedclothes. Temperature 100·4°. There was no paralysis. A swelling was found over the vertex of the skull. This was cut down upon, and blood was seen effused beneath the pericranium, which readily peeled off the bone. The bone was bruised and yellowish. The inch-trephine was used. The dura mater, which bulged into the opening, and was covered with lymph, pulsated. Nothing more was done, except that the wound was dressed and cold applied to the head. The delirium, however, continued, and gangrenous pneumonia set in, which proved fatal on Jan. 13th, thirty days after the accident. After death the base of the brain was found to be bruised by *contre-coup*, and there was diffused meningitis.

The cases I have quoted were all examples of ostitis and necrosis, the result of a contusion of the bone associated with scalp wound. I could give as many more associated with fracture if they were needed, and they would all tell the same tale. In none of the cases were there any symptoms of brain injury after the accident, and in most the symptoms did not appear for a week or ten days or a fortnight afterwards. In all, the mischief which produced death had clearly originated in the bone. In none of the cases had much care been employed to guard against the secondary mischief which took place, and which led on to a fatal issue; and it may reasonably be thought that, if judicious treatment had been applied from the receipt of the accident, no such result would have been recorded. The conclusion is therefore clear, that all scalp wounds which lead down to bone should be dealt with, for at least a fortnight or three weeks, with much care; and that such cases should, if possible, be treated as in- and not out-patients of hospitals for that time. For it is not the wound treatment only which calls for care, but the patient should be kept quiet, and given a simple unstimulating diet. Stimulants of all kinds should be forbidden, and meat allowed in very limited quantities. If at the end of two or three weeks, or thereabouts, no local or general symptoms appear to suggest mischief, the duties of life may be gradually recommenced. But even then a caution should always be given to observe care.

When local symptoms appear, such as have been described, a free incision down to the bone where no wound exists, or a free separation of the pericranium where there is a scalp wound, always does good. And should any symptom appear or persist which even suggests any intracranial complication, the operation of trephining should at once be had recourse to. "The spontaneous separation of the pericranium, if attended with general disorder of the patient, with chilliness, horripilation, languor, and some degree of fever, appears to me," says Pott, "from all the observations I have been capable of making, to be so sure and certain an indication of mischief underneath, either present or impending, that I shall never hesitate about perforating the bone in such circumstances. ..... When there is just reason for supposing matter to be found under the skull the operation of perforation cannot be performed too soon; it seldom happens that it is done soon enough. The perforation sets the dura mater free from pressure, and gives vent to collected matter, but nothing more. The inflamed state of the parts under the skull, and all the necessary consequences of such inflammation, call for all our attention fully as much afterwards as before; and although the patient must have perished without the use of the trephine, yet the merely having used it will not preserve him without every other care." The prevention of this fatal trouble is, however, the more important point to emphasise; and for that purpose I bring the subject before you. Its early treatment may be beneficial and successful; its later treatment cannot be said to be so. Let us, therefore, teach the necessity of keeping patients with all but minor scalp wounds, and with those even where the bone is exposed, quiet and unstimulated for some weeks after the receipt of the injury where it can be done, and by so doing give nature an opportunity of repairing the mischief in the bone, which, though unseen, may reasonably be expected to be present after the application of a force sufficient to produce a scalp wound or a more severe injury. When a blow upon the head is known to have produced a fracture, the case is likely to be treated carefully; whereas, when no such fracture can be made out, and there is little or no external evidence of injury, the same care is not likely to be observed, although in both cases the violence which had been employed may have been equal. Yet in both cases the dangers of cranial ostitis from contusion are about the same. The fact, I am sure, requires to be emphasised, that cranial contusions, whether associated or not with fractures or with wounds, are always matters of serious importance, and as such should be treated from the first. Having dwelt upon the dangers of these cases, and illustrated some fatal results, I propose to quote a few examples of their successful treatment.

CASE 20. *Scalp wound, and subsequent ostitis, treated by trephining; fissured bone discovered; cure.*—Catherine S——, aged twenty-eight, came into Guy's Hospital in July, 1884, under Mr. Howse, with a scalp wound and fissured fracture of the skull, the result of a blow from a machine. She had no head symptoms, either at the time of the accident or after, and in six weeks she was discharged, supposed to be cured. A month later she was readmitted for continual

headache and local pain in the seat of the former injury. She stated that she had not been able to work since she left the hospital. The old wound had reopened a week after leaving. On her readmission bare bone was felt—indeed, a piece of dead bone was taken away. In a day or so the pain in the head had much increased, even to make the patient scream. A crucial incision was then made down to the skull, when a fissured fracture was discovered. This operation did not give relief; consequently, she was trephined over the seat of fracture. The bone was found to be very dense and thickened, and its outer surface rough and pitted. No diploë existed. The dura mater was rough, and shaggy from adherent lymph. All cerebral symptoms had disappeared on the second day after the operation, and a rapid cure took place.

CASE 21. *Contusion of the head; ostitis; trephining; discovery of fissured fracture; cure.*—Harry D——, aged five, was admitted into Guy's Hospital, under the care of Mr. Howse, on Sept. 29th, 1880, having two weeks previously, in a fall, struck the left side of his head against a kerb-stone. He was unconscious after the accident for a few minutes, when he vomited. He was kept in bed for two or three days, and was supposed to be convalescent, when he had headache, and at night some lightheadedness. And these symptoms persisted up to his admission to the hospital. At this time, a fortnight after the injury, a fluctuating swelling about an inch in diameter was discovered beneath the seat of injury behind the coronal suture. There was some fever with night delirium, but no paralysis. He was trephined at the seat of swelling, when a fissure in the bone was discovered, and the dura mater was seen covered with lymph. From this time everything went well; headache and delirium disappeared, and convalescence followed.

CASE 22. *Scalp wound; "puffy" swelling; trephining; cure.*—William T——, aged four, was admitted into Guy's Hospital, under Mr. Howse, on June 5th, 1885, having a week previously been struck above the right orbit by a swing and received a scalp wound down to the bone. He progressed well for two or three days, when the wound began to inflame and he became feverish. In this condition he was admitted. The wound at this time was sloughing, and the bone was exposed. Temperature 101°. A few days later, as no improvement took place, and the child was drowsy, the bone was trephined at a spot near the wound, which had become "puffy." The dura mater where exposed was granular, and the bone eroded. All symptoms at once disappeared, and a rapid recovery followed.

I will now pass on to consider the treatment of head injuries in the light of the view I am now advocating, for I am under a strong impression that such a view cannot do otherwise than have an important influence in rendering treatment more simple and intelligible; since, if in every grave, or indeed apparently uncomplicated, example, associated with more or less complete paralysis of at least one of the brain functions, such as is indicated by unconsciousness, the surgeon recognises to the full the force of the fact that the brain as a material organ is bruised or otherwise injured, a line of treatment is likely to be at once suggested which can best favour the restoration of the injured part towards health. Amongst the means which would probably find favour, physiological and mechanical rest would stand foremost, with the administration of nourishment simple enough to maintain the normal powers and help repair, and not stimulating enough to excite action. Everything in the form of alcoholic stimulants or solid meats would be forbidden; and this line of treatment would, moreover, be maintained for weeks, and possibly for months, the severity of the injury and the primary symptoms forming the surgeon's best guide to a decision. This careful line of treatment would also be adopted under the wholesome dread of exciting, by sins either of omission or of commission, the one common complication which the surgeon should ever have before him—namely, an inflammatory action in the injured organ. For experience speaks in no feeble terms that this action is readily started and with difficulty quelled, and that it is by such inflammatory changes in the injured brain that most head cases, simple or severe, are brought to a fatal termination. Mr. Hilton recognised this necessity nearly thirty years ago, for he taught "that recognised lesions of the brain and its membranes, associated with blows upon the head (whether the cranium be fractured or not), do not generally, or as a principle of treatment, obtain that extent of mechanical rest which is consistent with the expectation of perfect and complete structural repair. This error in the treatment of such cases is one of the chief sources of the diseases of the brain and its membranes which are met with in practice. ..... In cases of injury of what may be called the coarser structures, with more simple functions attached to them, we see that without perfect restoration of the structures their functions are not efficiently performed, and if used too early and too much they become painful and assume a chronic inflammatory condition. Such soft parts require weeks or months for their repair. Surely, then, we ought not to deny the necessary and proportionately much longer time for the repair of the more delicate brain tissues; a repair, be it remembered, which cannot be accomplished by any direct aid from the surgeon, but only by Nature herself employing her chief agent—Rest." It is a pleasure to me to be able to quote these apt sentences, framed by a former teacher and colleague upon this important subject—although many years have passed since they were uttered,—to support the views it has been my privilege to bring before you—views, I may say, that I have for long taught at Guy's, and have reason to believe with some advantage.

Should symptoms of intracranial irritation or inflammation show themselves, they should be dealt with actively, as, from the nature of the brain and its membranous coverings, the process once started soon spreads. In the early stage the application of cold to the head by means of a Leiter's metallic tube is the most efficient local, and free purgation the most effective general, means, with very low diet. If the inflammatory action is great, a free bleeding from the jugular vein or from the arm is strongly to be advocated, and this operation may in many cases be repeated with much advantage. I am convinced I have saved some lives by this treatment. In chronic cases the value of mercury taken internally cannot be doubted.

These, then, are the common lines upon which the treatment of the common factor of all cranial injuries, simple or severe cerebral injury, should always be based; and they should likewise form the lines of treatment of all its complications. Thus, if a simple fracture of the vertex, base, or of both, complicates the case, the treatment is the same. The cerebral injury needs the surgeon's care, and not the fracture, which will take care of itself. A cranial fracture will heal in the same way as other fractures, but it will take a much longer period; and fractures of the base of the skull are apparently amongst the slowest. In specimens 1084^{82} (eighty-four days), 1084^{83} (ninety-one days), and 1084^{86} (eight years), of the Guy's Museum, and in others of our own College museum, this point is indicated. The fractures of the skull will, at any rate, probably heal sooner than the cerebral injury will be repaired. The treatment for the latter will consequently have to be continued after the fracture has healed. If the fracture be but *slightly depressed*, whether simple or compound, and it appears only as a *fissure*, the case had probably better primarily be left alone, and dealt with secondarily on the smallest indication of cerebral trouble; for in these cases there is really comminution of the inner table, and consequently nothing in the form of bony spicules to fret and irritate the dura mater, and thus help forward a meningitis. To trephine in order to elevate this form of fissured fracture would, therefore, be to add another danger to a case in which the form of cerebral injury common to all already exists. If the fracture be *depressed, starred, or comminuted*, whether simple or compound, the elevation of the depressed bone should be the rule of practice, and the removal of all the splintered fragments of the inner table carefully carried out, the object of the operation being more to take away what, if left, must irritate the dura mater, and so add to the existing harm, than to relieve the depression. This operation should be performed as much in simple as in compound fractures, for the condition of the bones is the same in both; and with our modern treatment of wounds the danger of the operation in simple fracture is not materially increased. In *punctured fractures* the operation of trephining, undertaken with the object of removing the broken and displaced fragments of bone, should be a rule of practice never to be deviated from. The depressed and comminuted inner plates of bone to a certainty, if left, at a late if not early period of the case, irritate the brain and its coverings, and so set up an encephalitis.

How far the presence or absence of what are called brain symptoms should influence a surgeon in his decision as to surgical interference in the different forms of depressed fractures of the skull we have been considering has been

much argued. For the surgeon is quite unable in bad cases of cranial injury to differentiate symptoms, and to say how far those that are present in any individual case are due to the common factor—cerebral injury—which resulted from the force that produced the fracture, or how far they are caused by the depressed and fractured bone. But I am not sure that this is a point of much practical importance, for in a bad case of fracture of the skull cerebral injury is probably already severe, and the operation of elevating depressed bone and of removing comminuted fragments is not likely to aggravate the trouble; whereas in a less severe example in which the cerebral injury is likely to be less serious, the existence of depressed bone and of comminuted fragments must act injuriously, and should consequently be removed. Under all circumstances, it is consequently the surgeon's duty to remove whatever sources of trouble the presence of a depressed fracture may bring to an already serious case of cerebral injury.

The operation of trephining or of elevation of bone in depressed fracture is called for more with the object of removing from the brain what may or will be sources of local irritation rather than with any view of removing the effects of the depressed bone; for it is well recognised that, *per se*, a large area, and a considerable amount, of depressed bone are required to bring about symptoms of compression in an otherwise uninjured brain. Again, it is well known that a considerable extravasation of blood upon the surface of the brain, probably five or six ounces, whether between the bone and dura mater or in the cavity of the arachnoid, is required to bring about marked evidence of its presence, in the form of paralysis from compression. The rupture of the middle meningeal artery is a special complication of cranial injuries, or of fracture of the skull, but I do not propose to discuss it here at any length. I cannot, however, pass it by without referring to the exceedingly able article upon the subject published in the Guy's Hospital Reports for 1886, vol. xliii., p. 147, by my friend and colleague, Mr. H. A. Jacobson, since it contains not only a masterly account of every case on record up to date, but also a summary of the whole subject, which claims the close attention of every surgeon. His summary is as follows: 1. That the violence which causes middle meningeal hæmorrhage is often slight, and that in these cases no fracture may be present. 2. That where there is a fracture, it is often a mere fissure, and may involve the internal table only. 3. That the history of the case, and, above all, an interval of lucidity or consciousness, are invaluable; the latter being worth all the other symptoms put together. 4. That the symptoms of compression are in some cases deferred; that their onset may be then very sudden and rapidly fatal, failure of breathing being a marked feature. 5. That in those cases where the history is deficient, especially as to any interval of lucidity, and where it is difficult to be certain about the existence of hemiplegia, dilatation of the pupil on one side, that side corresponding to the clot, is a sign of great value. The explanation of this sign, that the third nerve is being pressed upon by a clot large enough to reach into the middle fossa, we owe to Mr. Hutchinson, with whose name in future this condition of the pupil should be associated. 6. That after trephining, exposure and partial removal of the clot, very severe hæmorrhage may set in and prove difficult to arrest. 7. That in severer cases laceration or contusion of the brain are only too frequently complications. This latter conclusion consequently links this special class of cases with the more general number of cranial injuries, and enables the surgeon to look upon them as a whole in the light in which I have now placed them before you.

There are many other questions in the surgery of cranial injuries which require elucidation, but time will not allow me to bring them under your notice. The points and questions I have selected are such as I believe to be most important to enable the younger surgeons and practitioners to read rightly the manifold and somewhat puzzling phenomena which severe cranial or cerebral injuries exhibit, and I have some confidence in the belief that, if the views I have expounded were accepted, the teaching and understanding of cranial or cerebral injuries would be greatly simplified. In conclusion, I must ask you who have listened to me so patiently and kindly to think over the questions I have ventilated, and to accept from me my warmest acknowledgments of the honour you have conferred upon me by allowing me, as your Hunterian Professor of Surgery, to deliver these lectures from this chair.

CASE OF

STRANGULATED CÆCAL HERNIA, TREATED BY HERNIOTOMY AND LAPAROTOMY; DEATH FROM APOPLEXY.[1]

BY SURGEON-MAJOR W. GRAY,
SENIOR SURGEON, JAMSETJEE JEJEEBHOY HOSPITAL, BOMBAY.

A. I.——, a Pathan, by trade an itinerant fruit seller, aged thirty, was admitted to hospital on May 13th, 1887, for a strangulated inguinal hernia on the *left* side. He stated that a reducible hernia had existed for six years, giving him little trouble, but that on the day previous to his admission, while on his rounds, it had descended and he was unable to get it back. He accordingly came to hospital for relief. The bowels had not been moved for two days. There was no vomiting; no tympanites; pulse soft and of fairly good volume; temperature 99°. It should be mentioned, too, that the patient was also the subject of a moderate degree of mitral obstruction. The scrotal tumour was the size of a small cocoanut, rather solid to the feel, and somewhat tender. As far as could be ascertained he had undergone no treatment before being seen at the hospital. An ice-bag was placed over the tumour, and a morphia injection given, but they failed to bring about any improvement in the state of affairs. Taxis was tried after a suitable interval, but without avail. At 10 P.M., as he was just beginning to show a little distress, I was sent for, and taxis, under chloroform, having again failed, I proceeded to perform herniotomy. On opening the sac—a practice which is the rule in the Jamsetjee Jejeebhoy Hospital—the first thing that came into view was the vermiform appendix. Further examination showed that the contents of the sac were the cæcum and about three inches of the ileum, all of which were healthy-looking, but a little congested. The cæcum was filled with fæcal matter and a little gas; the small intestine above was also distended with liquid fæces. The ring having been enlarged, reduction was attempted, but, to my surprise, I was unable to make the slightest impression on the hernia. The opening was still further enlarged until the gut lay loose in it, so to speak, and another and futile attempt at reduction was made. My next step was to try to remove some of the contents of the cæcum, but even with a large cannula they were too solid to come away. In any case, the little that was taken out was immediately replaced from the ileum. As far as I could discover, there was no obstruction to the return of the protrusion in the vicinity of the ring itself; all seemed free enough. The sensation conveyed during each attempt at reduction was that of pushing against some semi-elastic mass within the abdominal cavity, or as if the cæcum had descended behind the peritoneum. The gut would not "run" or "slide." Being now satisfied that I should not succeed in reduction by the usual method, I determined to open the abdomen between the umbilicus and pubes. I concluded that, if I failed to *push* the gut in, it could at least be *pulled* back. No further time was lost, therefore, in carrying out this determination; the abdomen was opened, and this is what I found: the cæcum had come across the cavity, from its normal position to the left ring, dragging with it a short meso-cæcum as well as a considerable amount of the peritoneal lining. Behind and above this, effectually blocking the road back, was a mass of small intestine. This being got out of the way, the ascending colon was sought out and seized, and after some traction, aided by pushing from without, the hernia was brought back into the abdominal cavity and properly replaced. All the parts, as well as the peritoneum generally, were now cleaned, and the abdominal wound closed with silk and wire sutures in the usual manner. My next step was to place a double silk ligature round the neck of the sac and fix the mass in the ring with a couple of sutures. The inguinal wound was then closed and both were put up with dry antiseptic dressing. The operation lasted an hour and a half. Notwithstanding its length and severity, as well as the mitral disease from which the patient suffered, he bore the anæsthetic wonderfully well.

[1] Read before the Bombay Medical and Physical Society.

Chloroform and Bryant's mixture were given alternately. In four or five hours he had quite recovered from its effects.

The operation described above was done under circumstances of some little difficulty. It was undertaken at night, the place was badly lighted, and the weather was very hot and oppressive. My observations of all the points connected with the case were not, therefore, so accurate or minute as they might have been under more favourable conditions.

For some days the patient went on fairly well, the temperature keeping generally at 100° or below. There was no pain or tympanites to speak of. He had two healthy motions on May 17th. He complained of cough on the morning of the 19th, and in the afternoon the temperature rose suddenly to 104·8°. Next day an attack of acute bronchitis was established. The coughing caused a good deal of abdominal pain. On the 20th the dressings were removed for the first time, when both wounds were found to be firmly united. They were re-dressed with a little dry boric cotton and oakum. The cough became less under treatment, and the temperature fell to normal. This favourable turn, however, was not to last. Diarrhœa set in on the morning of the 21st, and later on blood and mucus appeared in the stools. For the next ten days or so this state of matters continued. There were from six to ten liquid motions daily, usually containing blood and mucus, sometimes without either. The temperature remained at or about 100°, while the patient became steadily weaker and more emaciated. There was little or no abdominal pain, nor was there any tenderness about the cæcum. Every kind of anti-dysenteric treatment at our disposal was tried, but without effect. The wounds were again opened on the 23rd and the sutures taken out. No further dressings were required. On the 29th the calls to stool were hourly, and the patient became much weaker. A turpentine enema, with an increased amount of stimulant, brought about considerable improvement, and from this time he took a turn for the better. It now seemed evident that the source of the trouble lay in the rectum, and the appearance of pus in the stools served to confirm this view. Astringent injections, chiefly nitrate of silver, were now resorted to, with considerable benefit. The appetite improved, and he began to regain strength daily, although the rectal discharge still continued. I now had every hope of bringing him round, when about 10 o'clock on the morning of June 7th, after I had paid him my usual visit, he suddenly became unconscious, with muscular tremor, dilated pupils, and stertorous breathing. The temperature shortly rose to 103·4°, and the pulse was almost imperceptible. From this state he never rallied, and died at 4.30 in the afternoon of the same day.

I was fortunate in being able to obtain a post-mortem examination, a chance which does not often occur in surgical cases in Bombay; this was held the next morning. The wounds were soundly healed. On opening the abdomen everything appeared normal. Nothing was displaced, and there were no signs of peritonitis having occurred. The cæcum was in its proper position, the only thing abnormal about it being some extravasated blood in the neighbouring cellular tissue, showing, no doubt, where the lacerations had taken place at the time of its last descent. Being laid open, its mucous membrane, as well as that of the rest of the colon down to the sigmoid flexure, was apparently healthy. Lower down, however, and in the rectum, were several ulcers. The source of the dysenteric discharge was thus clearly demonstrated. A careful examination of the left inguinal region was next undertaken. Looking at the parts from within, the situation of the internal ring was indicated by a dimple in the peritoneal lining of the wall. No trace of a canal could be demonstrated. On opening up the external wound and dissecting the parts carefully, the external ring and inguinal canal were found contracted, and plugged by the neck of the sac encircled by its double silk ligature. All the parts were firmly fixed in position, and matted together by recently formed fibrous tissue. In fact, a radical cure had been obtained. An examination of the body of the sac, which still remained in the scrotum, showed its opposing walls adherent throughout. It was in process of obliteration, and it required some little force to tear asunder the adhesions. Proceeding to the heart, the mitral orifice was seen to be narrowed, while on the segments of the valves were several nodules of fibrin loosely attached and easily separable. Here at least was a plausible explanation (already suspected) of the apoplectic attack—namely, the lodgment of one of these vegetations in a cerebral artery. To confirm this view, or otherwise, the brain was removed and directions were given to have it preserved and hardened for later and more careful examination. Unfortunately, these directions were not attended to, and when I called for the brain it was decomposed beyond recognition. Considering all the circumstances, however, the explanation already suggested of the fatal result is probably the correct one.

Connected with this case several very important points invite remark. First, the hernia was cæcal. Within the last three or four years I have had to deal with three cases of strangulated cæcal hernia in adults, but all were on the right side. In the case just detailed the hernia was on the left side. As far as I can recollect, only one other case of the kind has been recorded, the reference to which I am unable to lay hands on just at present. The complete failure to reduce, after the usual operation of herniotomy, is noteworthy. In each of the cases of right cæcal hernia just mentioned difficulty of reduction was encountered, but I succeeded at last. Judging at least from my experience, it would seem that a cæcal hernia is more difficult to reduce than any of the other varieties. The effecting of reduction by laparotomy, after herniotomy had failed, is, as far as I know, an operation that has not previously been recorded. I see in one of the journals recently a writer advocating laparotomy for strangulated hernia, but I do not think his views are, for obvious reasons, likely to be adopted, except, indeed, in cases of necessity, like the one under discussion. It has since occurred to me that inversion of the patient might possibly have got the obstructing mass of small intestine out of the way, and have thus permitted of the return of the cæcum without the necessity of resorting to the extreme measure described. Considering especially the adverse circumstances under which the operation was done, the rapid healing of both wounds without peritoneal or other inflammation may reasonably be regarded as a triumph of simple antiseptic surgery. Thorough cleanliness and dry absorbent dressing with iodoform were the only means employed. All the elaborate precautions recommended in books were disregarded. The tolerance of the peritoneum to prolonged operative interference is also well illustrated in this case. The vitality of the patient seems remarkable. Although the subject of mitral disease, he bore the anæsthetic perfectly well for an hour and a half, and appeared to suffer in no way from its effects. The complications, too, during the progress of the case, the severe attack of bronchitis, and the exhausting rectal discharge, were, together with the operation, not able to kill him. But for that untoward embolus I feel confident he would have come safely through all his troubles. The last point to be noted is the ease with which a radical cure of the hernia was effected by the simple procedure of placing a silk ligature on the neck of the sac, and fixing this in the ring by a couple of wire sutures. Its success was fully demonstrated at the post-mortem examination. Of late years it has been my usual practice to place a ligature on the neck of the sac in all cases of herniotomy, but before doing so a ring of the serous lining, opposite the point where the ligature is to be placed, is excised. This is done by way of promoting adhesion of the parts. The body of the sac is never removed; it is merely rendered aseptic, and it never gives the least trouble afterwards. Not wishing to cause further delay in the present case, I omitted to excise the ring of serous lining, yet adhesion took place quite as well without this step as with it. Authorities on the radical cure of hernia recommend the removal of the entire sac, a most troublesome piece of dissection. The examination here, however, demonstrated what I had already been pretty well satisfied of—namely, that this part of the operation is altogether unnecessary. The sac has only to be rendered aseptic, and, if very large, drained through a counter-opening, when it may safely be left to take care of itself.

Killiney, Ireland.

NEW NURSES' HOME, GLASGOW.—The inauguration of the new Nurses' Home, in connexion with the Royal Infirmary, took place on the 31st ult. It has been erected at a cost of upwards of £8000, and can accommodate 82 nurses, so that there are now, altogether, single rooms unconnected with wards for 120 nurses. As soon as the home is occupied forty beds will be liberated in the hospital and available for patients.

CASE OF LAPAROTOMY FOR INTESTINAL OBSTRUCTION.

BY N. MAYNE, L.K.Q.C.P.I., &c.

ON March 10th, 1887, I was called to see W. A——, aged sixty-seven, who was reported to be suffering from severe pain, whose abdomen was greatly swollen, and whose bowels had not moved for several days, notwithstanding the administration of large doses of medicine. On my arrival I found the patient very desponding, pulse 120, temperature 101·1°, tongue brown and dry, insatiable thirst, constant vomiting, abdomen tympanitic, and in great pain; the tenderness of the abdomen was most intense, and was said to have begun at a point midway between the umbilicus and pubes and to the left of the linea alba. The rectum was empty, and presented no sign of disease. He did not suffer from habitual constipation. Having administered an enema of warm water and olive oil, the greater part of which escaped by the side of the enema tube, I had the abdomen well rubbed with castor oil, a large poultice applied, and gave hypodermically half a grain of morphia and one-hundredth of a grain of atropine. I also ordered a draught composed of morphia, tincture of belladonna, and tincture of hyoscyamus to be given in three hours, and repeated every fourth hour should the pain continue; a turpentine and opium stupe to be applied at bedtime over the abdomen; egg-and-brandy to be given often and in small quantities; and to have in the morning a tablespoonful of castor oil with a teaspoonful of turpentine, if not better. I at the same time told the patient that if he did not obtain relief before my visit next day, which I considered improbable, I thought it would be necessary to resort to an operation, the nature of which I explained to him.

On seeing the patient the following morning I found him very prostrate; pulse 140; temperature 102·2°; vomiting very severe and stercoraceous. I told him I believed the only chance of saving his life was an operation, and if it was to be successful the sooner it was performed the better. He said he was quite resigned to die, but that if not better he would come into the hospital next day. I ordered the treatment to be continued and poultices of bran to be applied every second hour, and before leaving cautioned him against taking croton oil or any other strong purgative, for by so doing he would make his case hopeless and destroy any chance of an operation being successful, and then I should have to reconsider the advisability of undertaking it. Another doctor was called in two or three days afterwards, and was told my opinion. He recommended him to go to the hospital and consent to the operation.

On March 15th, when brought to the infirmary about 2.30 P.M., the patient was in a state of collapse, with a pulse of 140 and a temperature of 103·2°, and to all appearance dying. Having given ether hypodermically, and got him to swallow some brandy, heat being applied to his body by means of hot-water jars, rubbing, and hot blankets, he rallied. There being diffuse bronchitis in both lungs, it was with some fear that he was put under the influence of chloroform. Having made an incision about four inches in length, and cautiously dividing on a director all the tissues, the peritoneum was opened. I intended to have examined the contents of the abdomen carefully with my hand, in order to discover the seat of stricture, and, if necessary (using every precaution), withdraw length after length of intestine till I found the part where the obstruction was situated; this, however, was not required, as the intestine appeared through the opening in a gangrenous state. With great care I passed my finger through the lower end of the wound in the peritoneum, and found the intestine tightly bound down to the peritoneum. On withdrawing my finger, all support to the intestine being removed, it immediately burst, and a large escape of flatus and thin fæces resulted. With great difficulty I drew the intestine through the wound, which I protected as much as possible with sponges. When the discharge from the intestine had lessened, I carefully cleansed the wound of the abdomen, and stitched the intestine to its lower part, taking care that the stitches were in sound tissue. I then closed the wound, leaving an opening where the intestine was fixed of about two inches. The wound was covered with a pad of lint well impregnated with iodoform, which was kept *in situ* by a strong calico binder. The patient was placed in a well-warmed bed, an ounce of brandy and two grains of quinine ordered to be taken, and morphia and atropia administered hypodermically. Temperature 103·1°; pulse 160, weak and compressible. He declared himself greatly relieved. He was then ordered a pill every fourth hour, composed of two grains of sulphate of quinine, half a grain of opium powder, a quarter of a grain of extract of belladonna, and three grains of hyoscyamus; and to have a tablespoonful of brandy-and-egg mixture every hour. On visiting him at 6 P.M., I found the dressing and bed saturated with the discharge of fæces. The dressing and the soiled linen were changed. He said he was very easy, but weak, and could not live. At 10 P.M. I had again to change the dressing and bed linen. Temperature 103·3°; pulse weak and irregular, but could not accurately count it. A catheter was passed, and fourteen ounces of urine drawn off.

March 16th.—At 4 A.M. had to change dressing and linen. Again complained of great weakness and sensation of falling through the bed. Temperature 103·2°. The cough is very troublesome, and forces fæces through the wound.—8 A.M.: Vomiting. Cough very troublesome. Changed dressing. Temperature 104°; pulse scarcely to be felt. Continued pills; ordered two ounces of champagne and dessertspoonful of brandy every second hour; a tablespoonful of very strong beef-tea to be given between each dose of champagne. Passed catheter.—12 noon: Pulse better. Vomiting ceased, but cough very troublesome.—9 P.M.: Appeared to be dying. Complained of want of air and inability to breathe. Gave brandy and half a drachm of ether. Turpentine stupe applied to back and chest. To have a mixture of carbonate of ammonia, bark, and senega; the brandy to be increased to a tablespoonful dose.

17th.—Temperature 104·2°. Treatment to be continued. Wound dressed three times. The case appeared hopeless.

18th.—Temperature 103·3°. Cough very distressing, and considerable bronchorrhœa. When dressing the wound, owing to a fit of coughing, two of the stitches in the intestine gave way; it was again stitched to the wall of the abdomen. As it was necessary to dress the wound at least three times daily, owing to the discharge from the intestine, I thought that in order to prevent it I would make a roll of lint about two inches in circumference and same in length, round one end of which I securely fastened a strong ligature, and, having the roll covered with an ointment of iodoform and vaseline, I carefully put it into the wound in the intestine, leaving the end with the ligature outside, and securely fastened it with plaster to ensure that it did not slip into the intestine; over all I put the usual dressing and binder.

19th.—Temperature 103·3°. Although very weak, he appeared better. On dressing the wound I found the roll of lint (*cork* I may call it) answered its purpose and came out easily on pulling the ligature, a considerable discharge of fæces and mucus escaping after its removal.

20th.—Temperature 103°; pulse 146. Omit opium in pills, except at bedtime. Wound looking more healthy.

22nd.—Temperature 101·3°; pulse 120. Brandy reduced to a dessertspoonful. Washed out rectum by an enema of warm water and olive oil, carefully observing if any appeared in the opening in the intestine, but none could be seen. The rectum was from this date daily washed out; also every day a soft indiarubber tube was passed into the upper part of the intestine, and it was washed with warm water and olive oil. The intestine was united to the abdominal walls, and the sutures were removed.

25th.—Temperature 101°; pulse 120. Expressed himself as "getting well," but the cough and bronchorrhœa were very distressing. Considerable œdema of feet, and great pain in left leg. Urine healthy. Had some arrowroot, which he liked. Omit brandy from alternate dose of champagne.

27th.—Temperature 100°; pulse 120. Improved. Had cornflour for breakfast and supper. Stimulants to be given only four times daily; the beef-tea not to be so strong, and in larger quantities.

28th.—Temperature 99·2°; pulse 112. Had a solid motion on removal of plug. The cough and bronchial discharge were now the only source of anxiety, and kept him very weak and desponding. He had ten drops of turpentine and twenty of tincture of squills in mixture, with ammonia and senega, every fourth hour.

30th.—Temperature 99°; pulse 100. The patient afterwards steadily improved.

In consequence of illness, I did not see the patient again till May 6th; he was then walking about the ward. Before leaving hospital I procured for him a well-fitting umbilical

hernia truss, covered the pad with indiarubber, and told him to wear it. Every day he removes it for the purpose of defecation, and does not suffer the slightest inconvenience, though he follows his usual occupation (working on a small farm). When I saw him in July last, he declared he was in better health than he had been for years.

This case I consider clearly shows that the operation is not only justifiable, but one that should be performed in cases of intestinal obstruction; and that caution should be observed not to administer drastic purgatives—a practice which, I regret, is still often resorted to.

Longford, Ireland.

THE TREATMENT OF CONSUMPTION BY RESIDENCE AT HIGH ALTITUDES.

BY JOHN LOWE,

FORMERLY MEDICAL OFFICER OF HEALTH, WORKINGTON; AND VISITING SURGEON, WORKINGTON INFIRMARY.

THE discussion of the above subject at the Royal Medical and Chirurgical Society, as published in THE LANCET of May 12th, is worthy of attention. The difference of opinion on the part of eminent physicians is noteworthy. The material which guided Dr. Williams to important conclusions can hardly be considered inadequate for the purpose; nor is the mere expression of belief in the equal value of treatment at lower levels or at home sufficient to invalidate his position. It may be pardonable to ridicule a sojourn among the Alps as the best treatment for phthisis when one has not lived there. But is it wise? The climate does appear paradoxical to people in England, and I conclude from the remarks of Drs. Pollock and Quain that they have not adequate personal experience of an Alpine climate, especially in winter. I have lived there during the four seasons of the year, so there can be no *tu quoque*. A foreign physician has recently written a book to show the absurdity of sending phthisical cases to Davos. He declares very frankly that he has never sent any cases there himself, and that he has not visited the Alpine resorts. He argues from what he calls "natural laws," and the results which he has obtained in the south of France! Is there not too much of this clap-trap in our books and at our great societies? Life is not dialectics. If prejudice or Philistinism is to displace evidence in determining the treatment of disease, I do not see how therapeutics can progress. But as there is no permanently wise man, perhaps Drs. Pollock and Quain may reconsider their "most firmly" expressed beliefs.

I had an attack of phthisis in the apex of the left lung last summer. The lesion was well marked early in August, but I felt utterly unfit for work during many previous weeks. I proceeded to Davos on the advice of Dr. Clifford Allbutt and Dr. C. T. Williams, about the middle of August—that is, as soon as a pulmonary hæmorrhage permitted me. A very few days at Davos sufficed to drive away intolerable lethargy, and to restore appetite and sleep. I gained a pound in weight each week during the first three months, and kept it. At the end of eleven weeks I walked sixteen miles over a stiff pass in four hours and twenty minutes. After this I did a good deal of climbing, and indulged in exercise that was accounted violent. On Jan. 1st I went to Wiesen, and remained there in medical charge until May, when I returned to England feeling better than I had done for a couple of years before. All the signs and symptoms of phthisis are now absent, with the exception of the inevitable supra-clavicular dulness.

There can be no doubt in my case of the tubercular nature of the disease. Bacilli were present in abundance. Two of my sisters died of phthisis a few years ago, and there is a family history of the disease as complete as could be wished. It began in my case precisely as it did in my sisters, and in them the average duration of illness was under two years. They were treated, by the advice of a very eminent physician, in the manner advocated by Drs. Pollock and Quain; and, notwithstanding everything that could contribute to success in this climate, the disease never showed any evidence of arrest in either case.

When I felt what I suspected to be the earliest subjective symptoms of phthisis, I gave the English health resorts a trial for a few weeks. During this time I steadily lost weight and strength, until at last I had no inclination to move about at all. The Alpine climate changed all this in a few days, and at present I can put the weight, throw the hammer, or walk thirty miles with any man I know, not excepting his age or size. As there could be no question about the activity of phthisis in my lung last year, I believe there can be little doubt of its arrest now.

I had the opportunity of watching cases in Switzerland in every stage of the disease. I have had the same advantage in England to a greater degree. I never felt justified in giving a favourable prognosis in cases of phthisis sent to health resorts at home. Whatever may be said at societies, or written in books, the grim fact remains that, when the practitioner discovers phthisis, he is conscious of his utter inability to cope with it in this climate. I know a great many able men in large practice, and this is how they feel in the matter. There may be others, I admit, who really believe in the efficacy of respirating and general tinkering, but I do not know them. The English health resorts are the forlorn hope of phthisis, and so-called respiratory therapeutics—so far as they concern tubercular phthisis—constitute one method of advertising. I am aware of wonderful cases that are cited in even standard books to prove startling things, but I prefer to trust the evidence before my own eyes, and to do so I must reject authority in opinion. I believe it is wise to send an advanced case of phthisis to one of the English resorts, if only for the comfort thus afforded; but I hold it to be a cruel proceeding to do so in the early stage of the disease, and when little lung tissue is involved.

Many advanced cases of phthisis are to be seen at Davos which should not be sent there. They injure the good repute of the place and benefit nobody. If phthisis were diagnosed early, when there is slight consolidation, and Davos resorted to at once, there should then be no room for contention. Anyone can diagnose phthisis when there is a large cavity &c., but it is useless to discover the disease then. A practitioner in search of useful knowledge ought to go to Davos in winter, where he will find a lamentable testimony of our ignorance. He will be wearied by people describing how they were under their doctor at home many months before he discovered that they were suffering from phthisis, and then only when his attention was arrested by a hæmorrhage, or something prominent enough to make the case clear to an old woman. Cases with a large cavity in either lung are common enough at Davos. I have often wondered why medical men send these cases there to die. It is excusable to say that we cannot cure phthisis; but I am not sure that it is equally so to have to admit our inability to recognise the disease before a huge excavation exists in the lung. There has been a great deal of bacilli-hunting in our schools, and volumes of nonsense written about the pathology and cure of phthisis in recent years. Is it not as necessary to be able to tell when a patient has phthisis? We are all acquainted with the elaborate and learned controversy as to the pathology of the small-pox vesicle, but all the eminent contenders have not equalled Jenner in controlling the ravages of small-pox. It is not necessary to be always dodging bacilli with a microscope in order to say when phthisis exists. Our own senses and a stethoscope are surely adequate, and especially for the general practitioner, who sees the disease in its early stage, and has in consequence the most valuable opportunities for becoming expert in diagnosis. This field of study is evidently neglected, and post-graduate lectures point to a time when the general practitioner will have to submit to a State examination from time to time in order to show his competence to practise. Dr. G. H. Sutton pertinently writes: "Phthisis is said to be due to a bacillus, but of what use is that view in curing phthisis? Do not be contented to love knowledge for the sake of knowledge, but for what you can do with it. The "view" is inadequate to cure phthisis, and on this account we must look on phthisis as made up of many physiological disturbances, and it can only be cured by bringing these disordered physiological changes into order again; and here hope in the cure of phthisis can be entertained." This is, at least, common sense, and will conform with experience at Davos. "The constitutional state," says Dr. Quain, "is the most important factor in bringing about recovery." Precisely, and in an Alpine resort will be found every element that such state requires for its perfection. The climate there is the antithesis of that at home, and

herein consists its efficacy. The peculiarities of each are known to men who read medical literature, and I do not propose to touch on that topic now. I would only remark that the Alpine climate invigorates the consumptive, and our climate depresses him. Abroad he can increase his weight through muscular development by exercise; at home he may put on some adipose tissue at the expense of his muscular system. Is it necessary to ask which is the more likely to be lasting? To benefit by exercise in the open air one must enjoy the exercise. Among the Alps the consumptive is never weary of exercise, but at home he loathes it.

Our great physicians are at last convinced that pure air is useful as a preventive and as a remedy, but it is now half a century since Dr. Henry McCormack urged with great earnestness the utility of pure air, and plenty of it. His advice was treated long enough with lofty sneers and contemptuous ridicule. Dr. Boddington pleaded in 1840 for what Dr. Williams is ably pleading now. It is worthy of reflection that we have not advanced one step in the treatment of phthisis for nearly half a century. Its rational treatment is still opposed by men deservedly eminent, but the educated public outside the professional circle have been to Davos in large numbers. They have benefited themselves by the change. Their friends at home have been apt in contrasting them on their return with other relatives who came back from Hastings, Bournemouth, &c., crippled and dying. We may go on to argue; the public will act. They are acting now. McCormack and Boddington lived to purpose; they gave a verdict.

Southport.

ON THE PRESENCE OF AIR IN SUPPURATIVE SWELLINGS OF THE ABDOMEN.

BY EDWARD MALINS, M.D., M.R.C.P.,
OBSTETRIC PHYSICIAN TO THE GENERAL HOSPITAL, BIRMINGHAM.

PERCUSSION in the diagnosis of abdominal swellings is a recognised source of information, and under certain conditions affords valuable aid to conclusions. Thus, in the differential diagnosis between ascites and ovarian cystoma it would be impossible to be accurate without resorting to this among other methods of solution. In fæcal impactions and other complications it also gives valuable information. But it is more particularly with regard to localised swellings the outcome of inflammatory processes that I wish to call attention to a condition which, though it may be exceptional, is certainly of considerable moment in the estimation of the character of these particular enlargements, and, as a consequence, materially affects their treatment. I have met with four instances where the percussion note over the area of a limited swelling in the lower abdomen has been distinctly, and to carefully repeated examinations, resonant; and yet there has been fluid beneath in each case. In each also—and this is a point of some significance—the fluid has been purulent; in three of the four the odour was offensive, as is common in collections in the neighbourhood of the intestines; in the remaining one it was of a negative character. What is the explanation of this? It is my belief that it is due to a layer of air occupying the uppermost part of the space in the interior of the swelling, and that this arises from decomposition of the contents. The changes arising from putrefactive processes, we know, result in the generation of gases, and these, being light, find their way to the surface of the fluid which, in the usually recumbent position of patients under these circumstances, is just beneath the abdominal wall. The decomposition of the fluid in these cases is rendered more possible from contiguity of decomposing materials, always more or less present in the intestinal tract, and probably from bacilli, which find their way more readily from the intestines through tissues undergoing the changes of inflammation. Thus they become the foci of changes from which decomposition results. It is most likely by this means that such comparatively rapid changes take place where the cellular tissue of the pelvis or abdomen is concerned, and why decomposition is so frequent in this locality. Again, when we reflect upon the difficulty there is in the exclusion of air in which germs may live and move and have their being, the possibility of this origin is more apparent. It would seem that the pelvic and abdominal organs are fairly enclosed, and, that being so, are protected from outside influences of such a nature as here detailed; but in reality this is not so. There is nothing between a woman's peritoneal cavity and the external air; from the vagina to the uterus through the Fallopian tubes the tract is continuous, and under certain conditions the component structures forming this tract lose their tone, become less resisting, and practically offer no barrier to the entrance of air. This admission of air allows of decomposition, gathering strength as it passes along a surface, perchance reeking with all the necessary organisms for evil and most readily affording a basis for the manufacture and introduction of elements which, finding a congenial sphere, multiply and act in a manner after their kind. If this is so, and I see no reason to doubt the validity of the circumstances I have named, we gather an explanation which admits of being tested by clinical observation, and from this aspect affords a proof which has an interesting bearing upon the presence and value of percussion in relation to swellings in the pelvis and abdominal cavity. The following are the cases referred to:—

CASE 1.—Mrs. F——, aged twenty-six years. Married six years; no children; no miscarriages. There was a history of four months' illness, with abdominal pain and prostration coming on suddenly and accompanied by metrorrhagia and retention of urine. I saw her on Nov. 7th, 1887, with Mr. Alfred Freer and Mr. Hammond Smith of Stourbridge. There was a central swelling in the lower abdomen, reaching to just below the umbilicus, in the hypogastric and part of the two iliac regions; it was rounded, smooth, tender, and elastic to palpation, but distinctly *resonant* all over on gentle and as firm percussion as could be borne. The bladder was emptied by a catheter, when by the vagina and by the rectum bimanually a definite tumour could be recognised surrounding the uterus, which was below and in front. Temperature 103°; pulse 126; tongue red and dry. There had been no rigors or sweating. The diagnosis was suppurating hæmatocele. An incision was made in the middle line of the abdomen; this was deepened and the edges picked up with forceps. As the sac was opened carefully, there was a distinct escape of air, which "fizzed" out for an appreciable time. Nearly two pints of very fetid pus were evacuated, along with a number of flakes of decomposing lymph of various sizes. The space was thoroughly washed out with warm water and a glass drainage tube put in. The good effects were immediate, and, allowing time for so large a cavity to close, the patient made ultimately a satisfactory recovery.

CASE 2.—This was a case of remote parametric abscess. A lady aged thirty-five, the wife of a medical man, was confined on Dec. 27th, 1887, after an interval of seven years from the birth of her last child. There was some adhesion of the placenta, necessitating the introduction of the hand for its removal. She developed from the first a high temperature, quick pulse, and marked feebleness. I saw her for the first time on Dec. 30th, and Dr. Playfair met us in consultation on Jan. 3rd. After the continuance of bad signs for about ten days, there formed a well-marked phlegmon in the right broad ligament; it remained for some weeks, gradually decreased in size, and, subsiding, left some thickening only in its place. Still the temperature kept high, especially at night, with restlessness and want of sleep. There were profuse perspirations, quick pulse, and some ill-defined pain in the right iliac fossa; no shivering. After several weeks, with various exacerbations, there appeared a swelling in the right iliac region extending into the pelvis towards the uterus. Bimanually this could be felt to be a mass above the broad ligament, the latter being apparently free. Externally it was smooth, rounded in shape, *resonant all over*, the resonance being continuous with the cæcum. It became more prominent, and a hypodermic needle pressed into it deeply showed that it contained pus. I opened it on March 17th. After cutting down to the limiting parts, a small opening was made, through which air distinctly escaped; so much so that I thought the intestine was opened, and that perchance it was in front of the tumour. But on carefully enlarging the aperture, exit was given to about six ounces of thick pus. The cavity was washed out with a solution of mercuric perchloride (1 in 2000) and an elastic drainage tube put in. It is interesting to note that the temperature at once fell to normal, from having

been constantly elevated, at times considerably so, since the date of the confinement. It never reached above the natural standard subsequently, and from this stage, after a lingering illness with exciting alternations of hope and fear, the patient made uniform progress, and became rapidly convalescent.

CASE 3 (M. H——, aged sixteen).—On Aug. 4th, 1887, at the General Hospital, I opened in the median line a central swelling of the lower abdomen, which from the history I thought probably arose from a ruptured cyst setting up localised peritonitis. The swelling was limited in extent, smooth, pyriform in shape, with the base upwards, and occupied the hypogastric region to within an inch of the umbilicus; so central and defined in shape was the collection that previous to her admission the girl was suspected of being pregnant. Still the history was inflammatory, though there was suppression of the catamenia. It was tympanitic all over, the resonance appearing to pass into the surrounding intestine, or to be the effect of intestine in front. On opening the swelling, exit was given to a pint and a half of fetid pus, an evident rush of foul air being extruded from the first entrance into it. The exact cause was not found, owing to the matting together of intestine around. The space was washed out with a solution of boric acid and water, and a drainage tube put in. The patient made a good recovery.

CASE 4.—The subject of this case was also a girl, aged eighteen, who had an abdominal tumour thought to be ovarian. There was a strumous history, with pain, fever, and emaciation for several months, during which time the swelling appeared. The abdomen was resonant all over, but on careful palpation a swelling could be made out in the hypogastric and part of the left iliac regions, and reaching nearly to the level of the umbilicus. On March 22nd, 1887, I opened it, the first incision giving vent to gas distinctly. About a pint of purulent fluid was let out. The cavity was washed out as before, a glass drainage tube being put in. Suppuration continued for some months before the opening closed, but the patient eventually did well.

There were features in common in all these cases. In each, resonance was beyond question, being verified by others; the percussion note was distinctly indicative of the presence of air rather than fluid. In each case gas was plainly extruded from the first opening made, being recognised by hearing and by odour. The deduction is obvious that in such cases confidence in diagnosis cannot be made dependent upon any individual sign, but must be derived from a combination of different methods of examination.

Birmingham.

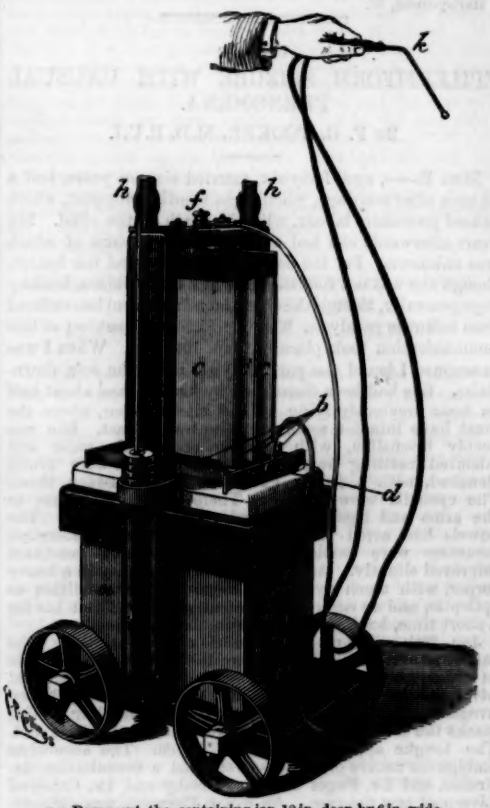
A RELIABLE CAUTERY BATTERY FOR CONSULTING-ROOM USE.

BY ARNOLD WOAKES, M.R.C.S., L.R.C.P. LOND.,
SURGEON TO THE LONDON THROAT HOSPITAL.

A FEW years ago I constructed for my father, Dr. Edward Woakes, a battery for the electric cautery that should be economical and durable in its action, as well as always ready at a moment's notice. This particular battery has now been in almost constant daily use for a period of nearly three years, and has never failed to act when required, although it has been frequently used as often as six times in one day. On several occasions the fluid has been freshened by the addition of sulphuric acid, and the loss due to evaporation made good by the addition of fresh water, but one charge of the fluid has on the average lasted for six months without renewal. This result, combined with the frequent applications I have had for the details of its construction, has induced me to place before the profession the principles upon which it is based, and the necessary details for constructing the same.

From the accompanying engraving, it will be seen that this battery consists of a single cell, the carbons of which always remain in the fluid, while the zincs are alone depressed, when in action, to a depth varying according to the strength of the fluid.

The chief improvements over other batteries by which I have arrived at the above results are:—1. The use of one large cell in the place of several smaller cells connected together for intensity. As a matter of fact, it is quantity, and not intensity, that is required for the cautery. One bichromate cell gives an electro-motive force of 1·8 volt, and is of quite sufficient intensity to overcome the resistance offered by the cautery, provided the conducting wires are not of great length; any addition in this direction is for several reasons—of which space does not admit of description—worse than useless. 2. The plan of letting the carbon plates remain always in the fluid is a point of great importance. It is adopted in smaller batteries for other purposes, but for some reason or other, when large batteries are taken into consideration, the carbons are almost invariably made to be raised with the zincs. By allowing them to remain always in the fluid the deleterious effects of crystallisation of salts in their pores are avoided; and since



a a Represent the containing jar, 12 in. deep by 6 in. wide by 10 in. long, inside measurement. *b* Represents the carbon plates, four in number, each 12 in. high by 7 in. wide by ¼ in. thick, all connected together by a brass framework to the positive terminal (*d*). *c c c* Represent the three zinc plates, each 12 in. by 7 in. by ¼ in., connected together to the negative terminal (*f*) *g* Represents one weight which, together with a similar weight on the opposite side, counterbalances the zinc plates, as a gas chandelier or window is balanced. *k* Represents the cautery connected by wires to the terminals (*f* and *d*).

the negative and positive elements are quite distinct from one another, and not, as is usual, connected upon the same base-board, short-circuiting from the creeping of the fluid is entirely avoided; and, furthermore, the weight to be lowered and raised is diminished by the weight of the carbon plates, and there is not a single counteracting disadvantage. 3. By counterbalancing the movable parts, the zinc plates are capable of being immersed with the greatest ease to any required depth, and are so easily movable that they can, if desired, be lowered or raised by one hand of the operator, while with the other the cautery is still held in position. 4. In order to enable the battery to be moved about from one part of the room to another, it is provided with wheels, but is not otherwise portable. A smaller battery upon the same plan could of course easily be con-

structed, but only at a sacrifice of durability. Any one of the numerous bichromate solutions will answer for this battery; or a solution of chromic acid, with a little sulphuric acid, may be used instead. When the battery is to be re-charged, the exhausted fluid is syphoned off and the jar, with the carbons still in it, filled up with several re-changes of warm water. The zinc plates should at the same time be sponged over and, if necessary, re-amalgamated, but no cleaning of these plates is required in the intervals. Mr. Evans, the late porter of the London Throat Hospital, has within the past twelve months constructed several of these batteries, but without the wheels, and entirely enclosed in a wooden casing, with, I believe, entirely satisfactory results.

Harley-street, W.

CASE OF

EPILEPTIFORM SEIZURE WITH UNUSUAL PHENOMENA.

BY F. G. TOOKER, M.D. R.U.I.

MRS. B——, aged forty-six, married sixteen years, had a fit soon after marriage, when eight months pregnant, which caused premature labour, with the death of the child. Six years afterwards she had another fit, the nature of which was unknown. For the next ten years she had fair health, though she was not robust. She has two children, healthy boys generally, though the eldest (aged fourteen) has suffered from infantile paralysis. The fit which is the subject of this communication took place on Jan. 19th last. When I was summoned I found the patient lying upon the sofa downstairs. She had been discovered by her husband about half an hour previously lying on the kitchen floor, where she must have lain for some ten minutes at least. She was deeply insensible, with scarcely perceptible pulse and laboured rattling respiration. The teeth were firmly clenched, with a frothy exudation from between them. The eyeballs were everted. There was no paralysis, as the arms and legs were tossed about at intervals. The bowels had acted involuntarily. The usual restorative measures were employed, and the patient's condition improved slightly. After removal to bed she lay in a heavy torpor, with much dyspnœa. Regarding her condition as epileptic, and an early improvement as likely, I left her for a short time, having ordered a stimulant treatment.

Jan. 20th.—The patient's condition is more serious. She can be roused with difficulty from the heavy collapsed state in which she lies, occasionally tossing her arms about and uttering a loud moan. Pulse almost obliterated, and very irregular. Much dyspnœa, with tracheal rattling, which masks the cardiac sounds. Lips livid, and extremities cold. The tongue appears sore, as if bitten. The somewhat ambiguous nature of the case rendered a consultation desirable, and Dr. Paget of Great Crosby and Dr. Caton of Liverpool saw the case. An exact diagnosis was difficult. Thrombosis of heart or embolism of pulmonary vessels was suggested as probable. Stimulant treatment was agreed upon, as there was great collapse. The swallowing being good, she was ordered ether and brandy by the mouth, together with some meat preparations; also ether and strophanthus tincture (three minims), every hour hypodermically, were given alternately; while nutrient enemata of beef essence were administered every three hours by the rectum. After eight hours of this treatment the patient improved, the pulse becoming more perceptible and respiration easier. The bladder and bowels acted well and voluntarily. The urine was examined, and found to be normal. She was now ordered a mixture of tincture of strophanthus (three minims) every three hours, and ether inhalation in case of syncope.

21st.—Pulse and respiration much improved. Consciousness still very impaired. Patient restless, but uninterested in all around. Often groans as if in pain; replies in monosyllables to questions, and expresses herself as not being in pain. Ordered four grains of carbonate of ammonia every three hours, and two ounces of champagne alternately every three hours; and to be given bromide of potassium by rectum.

22nd.—Improvement continued. Patient restless, with sleeping intervals. Heart sounds are audible: first sound indistinct; second sharp. Temperature 96°. More conscious. Articulates slowly, but distinctly. Complains of pain in the head. Ordered a mixture of carbonate of ammonia, bromide of potassium, and tincture of strophanthus every four hours.

23rd.—Patient more intelligent, and taking nourishment well. Pulse good.

24th.—At midnight, exactly four days from the first symptoms, there was a change; the patient then became delirious, and to-day presents considerable mental disturbance. There is great torpor, with periods of muttering delirium and restlessness. When spoken to, the answer is "Yes" or "No," indiscriminately given. At times there is an apparent effort made to frame a correct reply to a question, but the wrong word is used, or only a word-like sound is uttered; the articulation is also very imperfect. The patient will not execute a simple movement of the hand or foot when asked; but there is no paralysis, as she often moves them freely when she requires. She will not or cannot protrude the tongue. Temperature 97·8° (highest yet attained). The bowels and bladder act voluntarily. Nourishment well taken. Ordered bromide of potassium with carbonate of ammonia every four hours.

25th to 26th.—The bowels and bladder now act involuntarily. There is slight anæsthesia of the right leg, and the right pupil is rather larger than the left. Intelligence more impaired; there is difficulty in attracting the patient's attention. She puts out the tongue slowly. Temperature 96°. The bromide of potassium was ordered to be stopped; the carbonate of ammonia to be continued, with stimulant treatment.

27th to 29th.—There is a gradual improvement. Much more consciousness. The patient promptly draws away her arm when it is pinched. There is more use of language. She can name several articles correctly after one or two attempts. She can write her own name legibly, but not so readily the names of others. On trying to read aloud, most words are blurred and indistinct. Some words she cannot say, but can write them. From this stage the patient improved steadily and generally. She became less aphasic; and now, nearly three months after her illness, she is in fair health, but still somewhat aphasic. Her memory for recent events remains much impaired since her illness.

Remarks.—Whatever diagnosis may be given to this case, the interesting features of it will, I think, remain the same. If from the history of former attacks and from the nature of this latter one we assign to it the name of epilepsy, then we have presented to us some exceedingly rare post-epileptic phenomena, as the profound collapse immediately following and the aphasic symptoms subsequently. If we regard cardiac thrombosis as the cause, we are not without difficulty in fitting the symptoms to such a theory; thus, the former attacks and the nature of this one, as also the absence of paralysis with the aphasia, are points hard to reconcile with a thrombus and subsequent emboli in the region of Broca's convolution. Perhaps a middle course between the two views will lead nearest to the truth, and in following it one would assign an epileptic nature to the original attack, and refer the after-symptoms to the formation of a thrombus during its course. The fall upon the kitchen floor may have produced some symptoms of concussion which added to the profound collapse following the fit. The treatment affords, I think, much evidence in favour of strophanthus in desperate cardiac collapse, and also illustrates forcibly the truth that in such cases there is hope while there is life. I am indebted to Dr. Paget for some important notes on the case.

Blundellsands.

SHEFFIELD GENERAL INFIRMARY.—The ninety-first report read at the annual meeting of the governors and subscribers to the institution, held on the 5th inst., states that during the past year the expenditure had exceeded the income by £177 0s. 1*d.*, which was attributed to the falling off in the Hospital Sunday and Saturday collections, and other minor causes. The number of beds now available are 200, of which forty-four are devoted to children's cases in distinct wards. The appointments for the increase of the honorary medical staff, as named in the preceding year's annual report, were made in September last, and found to be a source of considerable importance to the efficient working of the institution. The benefit derived by a large number of patients from the "Overend Convalescent Fund" was again recorded. The report was adopted.

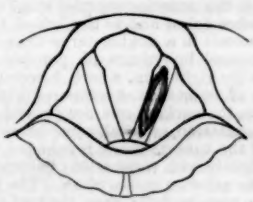
Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

CYST OF VENTRICULAR BAND.

By CHARLES W. HAYWARD, M.B.

WHILE attending the cliniques of Professors Schrötter and Schnitzler in Vienna, I had the good fortune last December to have assigned to me for treatment a patient who had come to the clinique of the latter professor. She was about forty-three years of age and of healthy appearance, but her voice was markedly affected with a harsh hoarseness. This, she stated, had first commenced rather more than six months previously, and had gradually got worse. On examining the larynx, the parts were found normal with the exception of the left true cord, which showed a large cyst. (See woodcut.) This cyst occupied the middle three-fifths of



the cord for its entire breadth, and was rounded, sloping off at the ends, and at the middle being about one-eighth of an inch in thickness. It presented a translucent slightly striated appearance, and during phonation was seen to interfere seriously with the accommodation and vibration of the cord.

The treatment adopted was as follows. Having painted the throat with a 10 per cent. solution of cocaine, I incised the cyst with Schrötter's guarded intra-laryngeal knife. A clear mucus-like fluid exuded. I attempted to obtain some of this for microscopical examination. I introduced a brush and pressed the contents out of the cyst, but, owing to the gagging of the patient, the examination was not reliable, the specimen obtained consisting of ordinary mucous secretion and some blood. I then, by means of Schrötter's pincette, pulled away the cyst wall, and then touched the site of the cyst with solid nitrate of silver. On returning next day, the patient stated that the pain had been very slight, and that she felt the throat improved. The site of the cyst was occupied by a white eschar from the nitrate of silver. The larynx was pencilled with nitrate of silver solution (10 per cent.). The pencilling was repeated for a few days with a weaker solution (5 per cent.), and by about the fifth day the white eschar was gone and the cord getting to look normal again. For three or four days the pencilling was made with chloride of zinc (chloride of zinc, 16; distilled water and glycerine, of each 240) instead of the nitrate of silver, and in about a fortnight the patient returned to her home with the hoarseness almost entirely cured.

The case excited great interest among the English and American doctors attending the clinique, and they will no doubt remember it should they peruse these notes, as they watched its progress all through, and envied me the good fortune of securing such a case.

Liverpool.

A CASE OF OPIUM POISONING.

By WILLIAM EASBY, M.D.

ON Sept. 5th I was called to the police station in Peterborough to see A. B——, aged thirty-seven, a tailoress. I saw her at 1.30 P.M., and was told that she had swallowed half an ounce of tincture of opium an hour before I saw her. A two-drachm bottle was found in her possession, which she stated had been filled twice. This was also verified by the druggists who sold it. She had been drinking during the morning, and had quarrelled with a man she had lived with for the last six years. When I saw her she was excited, face flushed, pulse quick, and pupils normal. I made her swallow half a pint of warm water, and then injected into the left arm ten minims of a solution of apomorphia, which contained one-tenth of a grain of the drug. She was violently sick in about two minutes, the vomited matter smelling of laudanum. The stomach was then well washed out with warm water introduced through a syphon tube, and she was kept moving about for several hours. My reason for reporting this case is to record the fact that a solution of apomorphia will keep good for some years. The solution I used was procured five years ago, and is as potent as ever. Some authorities appear to think that age decreases its powers, and when the solution becomes dark green it is inert. My solution is a deep green, and several hours after the drug was injected the site was plainly visible by a dark green stain under the skin. After washing out the stomach, I injected the 120th of a grain of atropine, and she was well walked about for some hours. At 7 P.M. she was giddy and drowsy, but able to walk about alone, and at 9.30 P.M. she was locked up for the night. The next morning she was complaining of some headache, and had been sick; with these exceptions she was quite well. From inquiry at the druggist's where the tincture was purchased, they informed me it was of pharmaceutical strength.

Peterborough.

REMOVAL OF HORNY GROWTH FROM THE DORSUM OF THE HAND.

By ERNEST H. ELLISON, M.R.C.S., L.R.C.P.

IT may possibly be of some interest to the readers of THE LANCET to have brought before them the case of Mr. S. W——, aged seventy-nine, resident in Castleton, Derbyshire, from whom on July 19th last I removed a growth entirely horny in consistence, presenting very much the appearance of a lamb's horn, measuring at the widest part of its base an inch and a half, and at its apex about three-quarters of an inch; the length of the horn being three inches, and curved from base to apex; the growth being freely movable with the integuments, and situated over the tendons of the extensor communis digitorum close to the meta-carpo-phalangeal joints of the fore, middle, and ring fingers of the right hand. The patient stated that the horn originated from a small wart about six years ago, which had frequently been subjected to irritation. Prior to removing the growth the tissues beneath its base were injected in three places with five minims of a 10 per cent. solution of cocaine. The removal was effected by two oval-shaped incisions, the patient describing the operation as perfectly free from pain. The wound was dressed antiseptically until Aug. 29th last, at which date cicatrisation was complete.

Should any other member of the profession have met with a similar growth on the same part of the human body, I shall be glad to be informed of it.

Castleton, near Sheffield.

INTERESTING CASE OF EMPYEMA.

By J. HORATIO DRAKE, L.R.C.P., L.R.C.S. Edin., &c.

J. B——, aged twenty-three, came under my care on May 13th, 1887, suffering from left-sided pleurisy, with effusion. Aspiration had been attempted three times previously, twice with partial success, but the last time unsuccessfully. The pain was severe; the temperature 103·5°. There was absolute dulness over the whole of the left side, and the apex beat could be seen and felt just to the right of the right mammary line. The pulse was very feeble and irregular, and beating about 120 times a minute. The breathing was considerably embarrassed, and the expression careworn. I attempted to aspirate, but without success, so an early operation was advised, which was agreed to. The next day chloroform was administered, and I made an incision in the fifth interspace, in the mid-axillary line, and penetrated to the depth of an inch without obtaining any fluid. I then inserted a director and carefully penetrated deeper, till at the depth of two inches fluid was

reached, and over seven pints drawn off. The fluid which flowed first was sero-purulent, but towards the end it was true pus. At the termination of the operation the temperature fell to 102·5°, the breathing and pulse improved, and the apex beat was felt at the left of the sternum, but still in the fifth interspace. A drainage tube was inserted, and the wound dressed with carbolic acid.

May 15th: Temperature 101°; pulse 100, gaining in strength and steadier. Cavity syringed with a 1 per cent. solution of carbolic acid and dressed as before. A mixture was administered of bicarbonate of potash and compound tincture of cinchona.—16th: Temperature 100°; pulse 100, steadier. Cavity syringed and dressed as before.—17th: Temperature 102°. Found drainage-tube blocked; removed it, and inserted a larger one. Cavity syringed and dressed daily.—18th: Temperature 99·5°; pulse 90. Going on well. After this the temperature never rose above 100°, and the patient progressed very satisfactorily.—On July 5th, 1887, the left side of the chest was found to measure 14·5 in., and the right side 16·5 in. The left lung was partially collapsed. There was a sinus about two inches deep, which continued to discharge. I endeavoured to close this by injecting a weak solution of iodine, but though the discharge lessened, the sinus did not entirely close. The patient, however, is now able to walk a couple of miles without feeling fatigue, and to do a little light work in his capacity as gardener.

Uffculme.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Prœmium.

MIDDLESEX HOSPITAL.

CASE OF PERI-RENAL MYXOMA; RETRO-PERITONEAL ABDOMINAL NEPHRECTOMY; RECOVERY; REMARKS.

(Under the care of Mr. GOULD.)

THE difficulties in diagnosis presented by this tumour were very unusual, and Mr. Gould in his remarks points them out and explains the reasons for their occurrence. We would draw special attention to the method of treating the peritoneum in this operation. By it the risks of peritonitis would seem to be diminished, and this of itself is a most important gain, especially as the shock of the operation does not appear to be increased, even when the peritoneum is stripped off over a large area. The importance of this will be obvious, as, in his statistics on abdominal nephrectomy, Gross places peritonitis next to shock as the commonest cause of death, ascribing 21 per cent. of the deaths to it. For the notes of the case we are indebted to Mr. F. C. Brodie, house surgeon.

A. C——, aged thirty, a railway porter, was admitted on May 1st, 1888, with a large abdominal tumour. Family history good. The patient had been a soldier for four years. He left the service eight years ago, and ever since had been employed as a railway porter. He stated that he had been married eight years, and had four children, all healthy. He had been quite well till January, 1888; he was then seized suddenly with severe cramping pains in the abdomen, which completely laid him up, lasted one day, and then as suddenly disappeared, but were followed by slight diarrhœa. In March, 1888, he was in the goods yard and was squeezed between two buffers, the coupling chain being tightly drawn across his abdomen. This caused him slight inconvenience for two days. A week later he had another attack of diarrhœa, which continued till April 3rd, the motions being of a light colour and rather offensive. He also noticed a swelling about the size of a Tangerine orange just below the umbilicus, which rapidly increased in size. There was a good deal of pain in the back, shooting down to the right testicle, which, he stated, had been painful and somewhat swollen for a month. He had for the same length of time had some difficulty in holding his urine, being disturbed several times during the night to pass it. For four months he had suffered from dyspnœa, and had frequently noticed blood in his motions. The urine had never been abnormal in appearance. On April 9th the tumour was aspirated at a point two inches and three-quarters below the costal arch in the nipple line, and four ounces of viscid mucoid and apparently blood-stained fluid drawn off. He had no pain following this, but an attack of acute tonsillitis, lasting several days, supervened.

State on admission.—Patient is a well-developed muscular man, with sallow complexion and rather melancholy expression. Pulse 86, regular, of good character; respiration 20. Tongue moist and slightly furred. Thoracic percussion note resonant, and equal on the two sides; it extends in the mesial line to within an inch of the xiphoid, in the right nipple line to the fifth rib, in the right axillary line to the seventh rib, and at the right back to the tenth rib. Heart's apex displaced slightly to the left, being in the fourth space in the nipple line. Abdomen: On inspection there is a large, somewhat ill-defined swelling, situated to the right of the middle line and causing some bulging of the lower ribs on that side. It is apparently continuous with the liver, as no resonant note can be obtained between them. The hepatic dulness commences above at the seventh rib, and the lower border of the tumour corresponds to a line drawn from the anterior superior spine of the ilium to a point two inches below and to the left of the umbilicus; from here it ascends in a double curve to an inch above the xiphoid (determined by dulness on percussion), and hence well back into the right loin, where, however, there is very little increase of resistance as compared with the left side. It is smooth on the surface, and not painful, but is slightly tender on manipulation, especially just below the umbilicus. The margin of the tumour below is rounded, and the whole mass moves slightly with respiration; fluctuation is distinct, especially in the anterior axillary line. The percussion note over the above area is dull; over the rest of the abdomen somewhat tympanitic. Splenic dulness normal. The girth of the abdomen at the umbilicus is thirty-four inches. The right spermatic cord is enlarged, due to fulness of the veins. There is no œdema of either leg. Urine clear; sp. gr. 1020; acid; no albumen.

Operation.—On May 12th, the patient having been anæsthetised, an incision was made through the skin in the right linea semilunaris about four inches in length, and the tissues were divided down to the peritoneal cavity, behind which the tumour was found to be situated. The lower thin edge of the liver was seen in about the normal situation overlapping the upper border of the tumour, whilst crossing its lower margin in front the collapsed colon was seen. The incision was now prolonged both upwards in a straight line and downwards in a curved line, the concavity being downwards and to the right. The peritoneum was then separated from the abdominal wall on the right side of the incision, and off the front of the tumour; and the original wound in it was united by a continuous suture of catgut, so as to close the peritoneal cavity securely. A syphon trocar was next introduced into the most prominent part of the tumour, and a few ounces of brown mucoid fluid escaped; as this did not run freely, the opening was enlarged after removing the trocar, and a large quantity of clot and soft gelatinous material removed with ovum forceps. The cyst wall, which was very thick and tough, was freed all round with the fingers, and the renal artery and vein exposed; these were tied separately with kangaroo tendon, after which the ureter was treated in the same manner. After several bleeding points had been stopped, the whole tumour was removed, and with it, but behind and only attached to its surface, the right kidney. Lastly, the cut end of the ureter was stitched to the skin at the lower end of the wound. There was but slight hæmorrhage, and the parts having been well irrigated with perchloride of mercury solution (1 in 2000), the edges of the incision were united by four deep sutures of fishing gut and eleven superficial ones of catgut, a large drainage tube was inserted, and the wound dressed with iodoform, boracic lint, and sal alembroth wool, fixed in place by strapping. On examination of the tumour after removal, it showed a thick capsule of fibrous tissue enclosing fluid and gelatinous substance. The wall was adherent to the kidney cortex, which was compressed and wasted by its pressure. The kidney itself was small, but not at all involved in the tumour. On microscopical examination by Mr. Roger Williams, there was found a ground substance composed of mucin and loose fibrous tissue,

with a large number of small round cells embedded therein, some of which were branched. There were no signs of fat.

May 14th.—Patient has been very comfortable; passed urine naturally. Wound re-dressed; drainage tube shortened one inch. No redness or tension about wound; no pain. Pulse 100; temperature 101·2°.

16th.—Wound re-dressed; slight serous discharge. No tenderness in loins. Tongue furred. Drainage tube removed. Bowels acted after two enemata and sodæ sulphas. Pulse 100; temperature 100·8°.

19th.—Wound re-dressed; the four deep sutures were taken out; track of drainage tube irrigated with perchloride of mercury. Pulse 100; temperature 100·2°.

21st.—Sat up in bed; feels better. Pulse 100; temperature 100·6°.

23rd.—Wound re-dressed; it has all healed, with the exception of the extreme lower end. Very little discharge. Superficial sutures removed.

25th.—There was a good deal more discharge, and pus was seen exuding from the middle of the incision. This opening was enlarged, and some more pus then escaped. Pulse 90; temperature 100°.

27th.—There was a good deal of pus and bloody serum in the dressing; very little tenderness, but some hardness along the incision. Boracic fomentations applied.

29th.—Discharge much less. Tongue clean. Pulse 86; temperature 98·6°.

June 2nd.—There is hardly any discharge. The patient got up this evening.

9th.—Had a sharp attack of tonsillitis, which sent the temperature up to 102·4°. Both sides were affected.

17th.—Has quite recovered from sore throat, and the discharge from the wound has nearly ceased.

23rd.—Went into the garden to-day. The wound has healed, except a surface about the size of a threepenny-piece. On the 25th he went to Margate.

Remarks by Mr. GOULD.—The diagnosis of this tumour presented certain difficulties, for in two or three ways its characters were not those common to renal tumours. In the first place, there was no zone of resonance between the liver dulness and the tumour—a fact due to the great size of the swelling; then the tumour moved slightly with respiration, which is a sign strongly relied upon to distinguish hepatic from renal tumours; thirdly, there was no colon-resonance in front of the tumour; and, lastly, the swelling was not prominent in the loin, nor could it be forced back into the loin. The great size of the tumour is in all probability the main explanation of these peculiarities; but the fact that the growth sprang from the tissue in front of the kidney only is largely accountable for the absence of all prominence in the loin. I have recently had under my care another case of myxo-sarcoma of the peri-renal tissues which was mistaken for a tumour of the liver, not only by myself and colleagues at Middlesex, but by physicians at another metropolitan hospital, and not a doubt was entertained of its nature until the post-mortem examination showed a condition very similar to that present in this case. [The notes of this case will shortly be published.] The method of operating adopted in this case appears to me to have important advantages. By opening the peritoneal cavity, the tumour (or kidney) to be removed can be thoroughly explored, and the state of the opposite kidney and of the other abdominal viscera can, if need be, be investigated. This can easily be done through a small incision. To complete the operation, the peritoneum must be stripped off from the lateral side of the abdominal wound, and this stripping must be continued until the whole of the front of the kidney or the tumour is bared. Then the two edges of the cut serous membrane should be carefully and closely sutured. By this means the subsequent steps of the operation and the operation wound are kept quite extra-peritoneal, and there is no risk of any injury being done to the colon. There is no difficulty in this stripping of the peritoneum, and such a measure has obvious advantages over the plan of occluding the peritoneal cavity by stitching the inner cut edge of the parietal peritoneum to the edge of the serous membrane divided just outside the colon. Where the surgeon has no occasion to explore the kidney to be removed or its fellow before completing the operation, the peritoneum should not be opened at all, but the abdominal incision carried down to the subperitoneal fat, and then at once the peritoneum stripped up, much as is done in the ligature of the external iliac artery. There is no other feature in the operation calling for comment; the attack of tonsillitis, which interrupted the patient's convalescence, was such as he frequently suffers from.

ST. MARYLEBONE INFIRMARY, NOTTING-HILL.

A CASE OF TUBERCULAR LARYNGITIS; TRACHEOTOMY PERFORMED WITH COCAINE; REMARKS.

(Under the care of Mr. W. P. PEAKE.)

THE following notes were taken by Mr. Hosegood, clinical assistant.

J. G——, aged forty-seven, a weak, strumous-looking woman, was admitted suffering from aphonia and cough. She stated that four years and a half ago she had a fright, which caused her to lose her voice, followed by a constant hacking cough and expectoration. Since this the symptoms had persisted and increased in intensity. The breathing also had become affected during the whole course of the complaint. She had wasted considerably. She said that her mother was healthy, and that her father and two sisters died of consumption.

On examining the chest, the left apex was dull on percussion, and bronchial breathing and pectoriloquy were present, amphoric breathing and whispering pectoriloquy developing during her stay in the infirmary. On examination with the laryngoscope, small ulcers were seen in the region of the vocal cords and some extensive ulceration around the epiglottis.

The patient continued in the same state for about six months. Trochisci cocainæ (one grain), administered three times a day, somewhat relieved the pain in her throat, and conium spray had the effect of relieving the pain also. During the last three months she has been going down hill rather rapidly, the breathing becoming more hurried, the dyspnœa being more marked during the last three weeks. On Aug. 24th, as the patient was suffering from very distressing attacks of dyspnœa, tracheotomy was performed. The state of the patient's lungs being such as to render an anæsthetic dangerous, it was decided to inject cocaine (5 per cent.) over the region of the incision. The skin having become quite anæsthetic, the usual incision was made below the cricoid cartilage, and each subsequent cut was immediately sponged with a 10 per cent. solution of cocaine. The patient bore the operation without wincing, and only suffered pain when the trachea was cut through. She had an attack of syncope before the operation was commenced, which was relieved by a hypodermic injection of brandy. The patient did well for three days, when her food began to come through the tube immediately on being swallowed; this continued more or less till her death, ten days after the operation.

Necropsy.—The larynx was found to be extensively ulcerated around the vocal cords, the ulceration stopping short one inch and a half below the cricoid cartilage. The epiglottis was ulcerated away completely, and food was sticking in the upper part of the trachea, evidently having been forced through the upper opening of the larynx. Left lung breaking down with tubercle. The right lung was studded with small caseating beads of tubercle.

Remarks by Mr. PEAKE.—I have called attention to this case because I think the local anæsthesia by cocaine essentially useful under the circumstances, chloroform being dangerous on account of the state of the lungs, and the probable movement of the patient rendering the operation more difficult if performed without anæsthesia, local or otherwise. In this case the operation was performed without pain almost from beginning to end. Cocaine has also the power of controlling capillary hæmorrhage. The case was interesting, also, from the fact of the food returning through the tube immediately on being swallowed, suggesting that the œsophagus had been incised. The necropsy showed that this was not the case, the food passing down the opening of the larynx.

ROCHDALE INFIRMARY.

A FATAL CASE OF COMMINUTED FRACTURE OF THE CERVICAL VERTEBRÆ WITHOUT IMMEDIATE SYMPTOMS; REMARKS.

(Under the care of Mr. R. BURDETT SELLERS.)

FOR the following notes we are indebted to Dr. D. F. Whiteley, house surgeon.

J. B——, aged seventeen, a stable boy, was admitted into the Bright ward of this infirmary at 6.30 P.M. on Aug. 28th,

1888, for injuries received by falling through a trap-door from a hay-loft on to a stone floor of the stable beneath, a distance of about twelve feet, and it was stated that he had fallen on his left shoulder. Examination did not reveal any serious lesion, and he only complained of some pain on movement, situated at the back of the neck and shoulder. There was no abrasion of the skin anywhere. He was quite conscious, talked reasonably, and could move all his limbs. The face was pale, pulse feeble and regular, breathing quiet, pupils very slightly contracted, and the temperature subnormal—viz., 95°. He kept in this condition up to 3 A.M. next morning, when his breathing became irregular and shallow, and the temperature had begun to rise, and at this time registered 102·6°; at 7.20 A.M. it was 105°, at 8.20 it was 106·6°, and at 9.20 it was 107·6°. He was perfectly conscious, and spoke sensibly to the nurse. At 9 A.M. he began to vomit, and continued to do so till a few minutes before 10 A.M., when he died, sixteen hours and a half after receipt of the injury. At 9.45 A.M. he had a slight convulsion. No symptom of paralysis or dyspnœa were noticed at any time.

A post-mortem examination was made six hours after death, when it was found that the third, fourth, fifth, and sixth cervical vertebræ were fractured as follows: Third cervical vertebra: An incomplete fracture through three-fourths of the body from behind forwards; each lamina was broken from its articular processes. Fourth cervical vertebra: The body was fractured into two lateral halves; the left pedicle was broken from the body, and the left lamina fractured in several pieces; the right lamina was broken from its articular processes. Fifth cervical vertebra: The body was fractured into two lateral halves; the laminæ were broken from the articular processes on each side, and the right lamina was also broken from the spinous process. Sixth cervical vertebra: An incomplete fracture through the body, the anterior surface being alone intact; also an incomplete fracture at the junction of the laminæ with the spinous process. The spinal cord and its membranes were found completely free from injury, but a blood clot was found between the broken bones and the spinal membranes. The head was opened and the brain found normal, excepting some slight congestion on the upper surface; there were evidences of a large contusion on the vertex of the skull, but no fracture of the skull at any part.

Remarks by Mr. SELLERS.—The special points in this case which I would call attention to are: (1) an injury of so severe a character in which no special symptoms were noticed; (2) the apparent absence of injury to the phrenic nerve, although the third and fourth cervical vertebræ were more seriously fractured than the rest; and (3) the temperature, which was the first indication noticed of any serious lesion. The probable cause of death was, in my opinion, either (*a*) from pressure of blood-clots noticed at the necropsy, (*b*) from severe general shock, (*c*) from profound disturbance of the nerve-centres in this region, or (*d*) possibly a combination of all these three factors. In conclusion, I may here say that soon after the accident the patient was very carefully placed upon an ambulance stretcher and removed to the infirmary under medical supervision. Perhaps, if other means of conveyance (or any undue rough handling) had been adopted, some displacement of the bony fragments might have taken place, and thereby have given rise to a train of symptoms which we so naturally expect in any severe injury to this region.

Notices of Books.

A Manual of the Operations of Surgery for the Use of Senior Students, House Surgeons, and Junior Practitioners. By JOSEPH BELL, M.D., F.R.C.S. Edin. Sixth Edition, revised and enlarged. With Illustrations. Edinburgh: Oliver and Boyd. London: Simpkin, Marshall, and Co. 1888.—The popularity of this work is shown by the fact that it has been generally recognised as a valuable aid to the surgeon since the publication of the first edition in 1866. Each edition—it has now reached the sixth—has been brought out under the direction and supervision of the author, and thus there has been continuity in the design originally laid down by him. It is unnecessary to say that during the twenty-two years it has been in print many alterations, excisions, and additions have been made to keep it on a level with the acknowledged best modes of operative procedure. On the whole, the book is well written, and the space fairly apportioned to the several sections of practical surgery. We had hoped, however, to find that a little more space had been allowed to operations of recent introduction or reintroduction. Curiously enough, too, there are several omissions which the reader would hardly have suspected. Thus, for instance, no mention is made of suture of the patella, Porro's operation, Ogston's operation for genu valgum, and others. The chapter on the Surgery of the Trunk Nerves, though short, is to the point. We hardly think, however, that the reference to stretching the spinal accessory nerve would be of much assistance to one about to perform the operation. It is a matter admitting of some doubt whether, in those instances where the author has insufficient space to give the various steps of an operation, it is worth while to write the directions so shortly as to be little more than an index. The letterpress of the work is excellent, and the diagrams, though few in number, are fairly well executed. The teaching of Dr. Bell is that of a sound experienced surgeon, and we believe that, as heretofore, his manual will be largely read and appreciated.

A Practical Text-book of the Diseases of Women. By ARTHUR H. N. LEWERS, M.D., M.R.C.P. London: H. K. Lewis. 1888.—This is an average specimen of its class—the class of text-books addressed to the unambitious student. If its aims are higher, it needs completion. As a pass manual too much space is occupied by the relation of the author's personal experiences, and by such operations as ovariotomy and extirpation of the uterus, which are quite beyond its proper range, and the room of which might be occupied by the expansion of subjects of more general utility, which are somewhat crowded out. Authorities are rarely quoted, and this is quite intelligible in a small work; but if names are quoted they should be quoted properly. For instance, on page 351 reference is made to Vedeler's statistics on the relation of anteflexion to dysmenorrhœa, and none to those of Dr. Herman. The quotation professes to be made from Hart and Barbour's manual; but on referring to that work we find Dr. Herman's name as we expected, and it has therefore doubtless been accidentally omitted by Dr. Lewers. There is a little slip already pasted in the book to correct a mistake; we advise the author to add another to correct this. The work is well got up by the printer and publisher.

Laryngoscopy and Rhinoscopy. By PROSSER JAMES, M.D. Fifth Edition. London: Baillière, Tindall, and Cox. 1888.—There are comparatively few manuals specially devoted to the subject of which this small work treats. As a rule laryngoscopy is either relegated to a chapter in general works on diagnosis, or else it is expanded into a monograph, which can hardly be of wide utility. Dr. Prosser James has, however, succeeded in presenting to the profession a book which, as a practical guide to the diagnosis and treatment of throat disease, has gained deserved success. It seems to us that a work of this class is admirably adapted for the purposes of the general practitioner, as well as of the student; for it is not too cursory to be superficial, nor too exhaustive to be beyond the needs of ordinary practice. The author states that in revising this edition he has practically rewritten the sections devoted to rhinoscopy, and has made many additions to the text. Those to whom the book is familiar will find ample evidence of the pains taken by the author in maintaining the work abreast of the times, whilst others will do well to make the acquaintance of a trustworthy guide to an important subject.

Mechanics and Experimental Science. By EDWARD AVELING, D.Sc. London: Chapman and Hall.—This is the first of a series of books intended to cover the ground

of mechanics, chemistry, heat and light, magnetism, and electricity, so far as these subjects are necessary for the purposes of matriculation at the London University. The new regulations, which came into force in June of this year, under which this examination will henceforth be held, make the three subjects last mentioned optional, in place of the examination in chemistry, which has heretofore been compulsory. It is to meet the condition of things thus arising that the present series of text-books has been projected. The first of them deals with mechanics, and has been written with great care. It will no doubt prove to be a very serviceable class-book; and especially commendable are the side-notes, index to formulas, and general index with which it is illustrated. A very useful collection of examination papers also adds greatly to its value. But, notwithstanding the evident care which has been bestowed upon its preparation, there are here and there some strange inaccuracies and infelicities of expression. Thus, we read, on page 33, of "any number of uniform velocities.....in the same straight line," without any explanatory reference to the difficulty that a body cannot have more than one velocity at one time in any one direction, and by consequence not more than two in the same straight line. Again, on page 104 the dictum, "in the case of surface reaction the opposing pressure is in a direction perpendicular to the surface, no matter at what angle the force opposed may act, or at what angle the surface may be inclined," is laid down without any proof of its truth or any clear indication of its great importance; while on page 80 we have the bewildering proposition that the energy of a moving body "will not *depend upon* the velocity simply, but upon the square of the velocity." Of course the author meant to write "*be proportional to*" instead of "*depend upon;*" but throughout the book verbal slips more or less serious are not at all uncommon. In the presence of a competent teacher, who can smooth away difficulties thus arising, these little shortcomings will not matter much, but to the solitary student they would become serious sources of difficulty.

The Illustrated Guide to Epping Forest (J. P. Murray, Queen's Head-passage, Paternoster-row) is a useful companion for holiday-makers who propose to spend a few hours at this sylvan retreat, happily preserved for the pleasure and recreation of Londoners. It is published at one penny, and is prettily illustrated.

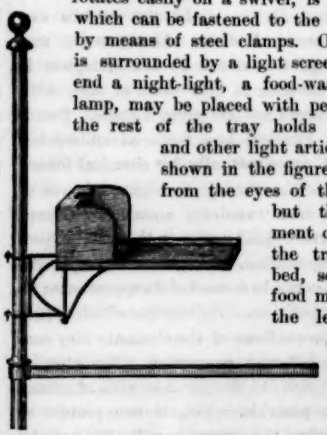
New Inventions.

ABSORBENT WASHABLE WATERPROOF SHEETING (PATENT).

THIS patent material, which is like ordinary mackintosh sheeting on the one side, resembles a soft bath towel on the other. We have received and tried a sample of it, and it possesses the following great advantages over non-absorbent waterproof sheetings. In the nursery, the sheeting is valuable when made into bibs, by securing dryness to the chest and clothes. For use as bed-guards and accouchement sheets, being perfectly soft and pliable, it does not ruck up or get out of position by any movement of the patient, and the discomfort and risk of chill attending the use of an ordinary mackintosh are prevented. For nurses' aprons, especially those engaged with children, it is very cleanly; the proofed side can be worn outwards during any operation or dressing, and, if soiled, can be easily cleaned with a sponge and then turned. Being absorbent, yet waterproof, it can be used with great success for wet packing and compresses. This material is guaranteed to wash in lukewarm water with soap, and after being rinsed may be put through any ordinary wringing machine, or may be wrung out by the hand, as its pliability leaves no fear of cracking. Though a little more expensive than the ordinary sheeting at the outset, the inventors claim for it that it will wear equal to three ordinary sheets. Messrs. Hedgcock & Co., of 138, Grosvenor-park, Camberwell, S.E., are the manufacturers.

ADJUSTABLE BED-TRAY.

THIS simple and very convenient invention is shown in the annexed illustration. A light wooden tray, which rotates easily on a swivel, is attached to a frame which can be fastened to the bedpost in a minute by means of steel clamps. One end of the tray is surrounded by a light screen. In this enclosed end a night-light, a food-warmer, or any small lamp, may be placed with perfect security, while the rest of the tray holds medicine, a watch, and other light articles. In the position shown in the figure the light is shaded from the eyes of the patient or nurse, but the slightest movement of the hand will turn the tray round over the bed, so that medicines or food may be prepared with the least possible inconvenience. The whole apparatus takes very little room, and, as its cost is moderate, it is likely to be extensively adopted. The manufacturer is Mr. S. H. Cousins, 35, Priory-park-road, Kilburn, N.W.



CLARKE'S PYRAMID NURSERY-LAMP FOOD-WARMER.

THIS admirable food-warmer consists of several parts, some of which possess novelty as well as advantage. The lamp itself is a neat tray and handle supporting a somewhat powerful night-light and a pyramidal or dome-shaped glass. This alone is valuable as a cheap and excellent lamp, useful for many other household purposes besides those of the nursery. Over the lamp is a water-bath, and immersed in this is a porcelain pannikin and cover. By an ingenious arrangement, the liquid pours from this pannikin in a small uniform stream, so that bottles may be filled without danger of spilling. The apparatus, which may be obtained of Mr. S. Clarke, 3, Ely-place, London, is moderate in price, and will be found of use in the nursery.

THE YORKSHIRE ASSOCIATION OF MEDICAL OFFICERS OF HEALTH.—On the 31st ult. a meeting of the members of this Association was held at York. Dr. T. Britton of Harrogate, the President, occupied the chair. A resolution which had been adopted at a meeting of the committee, held for the purpose of considering the new arrangement for members under the Association scheme to join the Amalgamated Society of Medical Officers of Health, was read and agreed to. The President exhibited a calculator by which the work of medical officers of health, who had large numbers of calculations to make, would be much facilitated; it was very simple and effective. The notification of infectious diseases in York was brought forward by Mr. S. W. North, and some discussion ensued. Mr. J. Mitchell Wilson read a paper giving his experience of cases of small-pox in the Doncaster district from December up to July, upon which some brief observations were made, and the meeting terminated.

THE LANCET.

LONDON: SATURDAY, SEPTEMBER 15, 1888.

AN interesting discussion took place in the Chemical Section of the British Association on the 7th inst, resulting from the sudden invasion of the chemical territory by the biologists led by such redoubtable antagonists as Professors FOSTER and THISELTON DYER, whilst the defence was maintained by Professors ROSCOE, ARMSTRONG, and GARDNER. The charge formulated by the biologists is that the chemists do nothing to help them in their difficulties. They ask for bread and are given a stone. Protoplasm, says Professor FOSTER, is a material undergoing constant change; built up perpetually by chemical forces, each particle of it gains the summit or highest degree of integration; and then like "vaulting ambition o'erleaps itself and falls on the other side" a prey to the wasting process, and tending to degradation. Unstable as water, it will not stand. No conception can be formed of its appearance; no act can analyse its composition. Substances which appear to be identical in the proportions of the elements they contain present widely different properties. No chemist would pretend to be able to distinguish with accuracy between many of the proteids. Yet, if one proteid be injected subcutaneously, the animal will die, whilst another is innocuous. In one state a proteid will be indifferent to oxygen gas; in another it will have a powerful affinity for it. As a recent writer puts it, the molecule of albumen begins to live by breathing oxygen. The relations of the proteids to physical agents are equally obscure. One form will coagulate between 50° and 60°; and another, which presents no visible difference, will resist a temperature of 70° F. The greater part of the body is made up of living material in which we can distinguish no essential differences. Yet the protoplasm of different animals is probably as different as the animals themselves. Again, in the case of the ferments, the physiologist requires to know why one substance acts as a ferment and another has no such action. What is the agent which, in the saliva or pancreatic juice, converts starch into dextrine and then into sugar; or, in the gastric juice, which changes proteids into peptones? What are the intermediate steps of the process? Why, in some ferment actions, do higher and more complex products appear; in others, lower? What is there in the bland fluid excited by the rattlesnake which holds such enmity to the blood of man? The same questions are asked by the vegetable biologists. They, too, wish to know the exact stages by which the living and active cell is formed from a chemical point of view, and the *rationale* of its operation on inert and non-living matter. What are the steps of the process by which the plant, from water, carbonic acid gas, ammonia, and a little mineral substance, can build up the stately palm, generate oil, tannin, sugar, and the thousand other products of the vegetable kingdom? To all this the chemist gives but a faltering and uncertain answer. Sir HENRY ROSCOE replies that, before the course of nature's action can be recognised and explained, the molecular constitution of the various bodies must be determined by synthesis in the laboratory; whilst Professor ARMSTRONG frankly admits that the ignorance of chemists on these points is due to the fact that they have been born too soon, and ventures the prediction that in fifty years many of these questions will be solved; whilst he seems to think that the knowledge of the proteids, as one branch of the inquiry, is a mere matter of money, and that for a few thousand pounds, distributed amongst competent men, we might learn something really valuable about them, though, if left to individuals, it would be long before any tangible results were arrived at.

After all, the remarks made by Professor GARDNER seem to be the most suggestive, for he pointed out that in the living substance the most gigantic changes and evolution of energy appear to be effected by the action of delicate reagents; and if any result is to be obtained in regard to the proteids, it will be by treating large quantities of them with similar solutions, rather than by the methods with which chemists are familiar. With respect to the question of vital force, he found considerable difficulty in thinking of protoplasm as a substance. He was of opinion that the phenomena of life consisted in an infinite arrangement and rearrangement of an exceedingly complex system of molecules, and that protoplasm would ultimately be found to be the development of energy and nothing tangible. It is clear that much work has to be done in chemistry before the professors of that exact science will be capable of affording any material assistance to the physiologists.

THE holiday season is producing its usual crop of casualties. From the seaside and the Swiss mountains come tales of accident and death, the frequency and familiarity of which should not make us oblivious to a proper sense of how much preventable misery they involve; for, without doubt, in the vast majority of cases such accidents are preventable. If, like the fatalities of the battle-field, they were part of the necessary order of things, if holiday-keeping had any inherent right to claim its annual quota of victims, we might be silent. There is little wisdom or advantage in protesting against the inevitable. But there seems no just cause why the annual holiday, now established as a necessary and salutary custom, should be enjoyed with any appreciable risk to limb or life. In few departments has modern civilisation made greater advance than in rendering travel cheap, expeditious, and safe. As a matter of arithmetical calculation, the traveller by rail or steamer probably runs less risk than the pedestrian in the streets of London, and such dangers as he encounters are either trivial or, if grave, are in more or less degree self-invited. The casualties of this season are, we repeat, in the main, clearly preventable.

These casualties are mainly comprehended under three categories—namely, deaths while bathing, boating accidents, and misadventures upon the mountains. Bathing fatalities are due mainly to two causes—first, ignorance of the nature of the strand or coast on the part of the non-swimmer, who ventures incautiously out of his depth, or is swept away by some unknown current; secondly, accidents to the swimmer in deep water while he is out of the reach of help. In the popular mind "cramp" is regarded,

probably without sufficient reason, as the chief cause of these latter accidents. It is clear that the former class of casualty might be almost wholly avoided if bathing were forbidden except at authorised places, and if care were taken to forewarn the non-swimmer of any peculiarity in the conformation of the coast or the nature of the prevailing currents. It would hardly be too much to ask the municipalities of our leading watering-places to exercise a little more real control over the bathing, which forms one of their chief attractions; to instal an official, with more authority than the usual attendant, who might supervise the entire bathing arrangements, forbid bathing at dangerous places and unsuitable times, and be responsible for the efficiency of life-saving apparatus. As regards the second type of case, we fear much mischief results from the common notion that all sudden accidents to the swimmer in deep water are due to "cramp." As a matter of fact, cramp, when it does occur, only incapacitates one limb, and need cause no fatality if help be reasonably near, provided the swimmer does not lose heart and give himself up. The cases, unhappily so numerous, in which the more or less accomplished swimmer is seen to struggle for a moment or two and then sink, are in all probability due usually to failure of the action of the heart. Such cases rarely occur except where the swimmer has exhausted himself by long immersion, and often by vainglorious efforts to accomplish some unusual feat of natation. We need, then, to teach that *feeble circulation*, and not "tendency to cramp," is the great indication for caution in bathing, and that individuals thus affected cannot safely remain many minutes in the water or essay any lengthened efforts of swimming. It would be pedantry to lay down any rules regarding the precise time during which immersion may be safely enjoyed, or the length of swim that may be prudently attempted. Everything depends, of course, upon the individual; but the bather may safely take it for granted that if he remains immersed until numbness of the extremities or shivering has set in, or if he continues to swim until he feels marked muscular fatigue, he has exceeded the limits of prudence. When accidents of this class occur, everything evidently depends upon the prompt use of life-saving apparatus. It cannot be too urgently impressed upon the public mind that in such cases every moment is of priceless value. Instances now and again find their way into the papers of resuscitation from drowning after immersion had lasted twenty, thirty, or forty minutes; and the public, with its usual appetite for the marvellous, reads such cases, and gets a hazy idea that there is practically no limit to the time after which recovery from submersion is not at least possible. Such a belief is in every way lamentable. While we must grant that the time cannot be definitely fixed, and varies according to age, sex, and the peculiar circumstances of the case, it should be emphatically taught that death from submersion generally ensues in *from four to five minutes*, and that after that period, while it is right to make persevering use of proper remedies, recovery cannot be confidently expected.

Accounts of mountaineering accidents generally reach us from Switzerland. They may sometimes be an apparently inevitable concomitant of a most exhilarating and health-giving pastime, but oftener they are due to the neglect of reasonable precautions. In the Alps mountaineering is a profession requiring soundness of heart and limb, long practice, and a special training. The guides are as much experts in their way as skilled yachtsmen, and it is the merest folly on the part of the tyro to despise and dispense with their invaluable aid. No doubt, mountaineering in a small way may be tried by anyone who has the taste and the necessary strength for it; but where the ascent of snow mountains is essayed, especially of such giants as the Jungfrau, the Matterhorn, or Mont Blanc, guides are indispensable, and their presence and help will avert many a threatened accident.

It is to be feared that many accidents of the holiday time owe their origin to a spirit akin to bravado. The desire to swim a few yards further or to climb a few hundred feet higher than someone else is often the motive impelling the unwary to attempt feats that are dangerous and useless We see in the immense popularity of public exhibitions involving great risks to the exhibitor the same drift of public sentiment, against which all leaders of opinion should raise their voices. We must teach that there is nothing noble in soliciting needless danger for profitless ends, that all ostentation of bravery is unseemly, and that the truest nobility of character may be shown in declining perils which promise no good, and may bring infinite mischief upon us and ours.

THE history of the progress of modern surgery is very closely intertwined with the history of the discovery of anæsthesia-producing agents, and the increased facilities acquired in their application. It is almost trite to say that, but for our knowledge of how to produce anæsthesia, abdominal and brain surgery would never have gained their present position in the van of operative therapeusis. With the disappearance of the necessity for manipulative celerity became possible the most extensive and laborious operations, involving deep dissection and patient exploration. The history of the discovery of chloroform and ether reveals rivalry between these anæsthetic agents which is not desirable. Side issues have been allowed to creep in and obscure the broad bearings of the true question under consideration. Amongst others, the following causes have led to a nearly universal adoption of chloroform, or some chloroform-containing compounds, as the routine anæsthetic in general practice. The mere "getting a person under" is easy of accomplishment when chloroform is used, and needs little apparatus beyond a drop bottle and a folded towel, and this is a matter of no slight importance to the busy practitioner. And, further, owing to the lamentable absence of instruction in the methods of administering anæsthetics, few students gain any experience in the modern modes of procedure, and are quite incompetent to etherise a patient in a satisfactory manner; they find chloroform pretty easy, and so adopt it. But another agency at work has been the strong predilection among Scotch surgeons for chloroform, and the unhesitating manner in which the advantages of that anæsthetic have been paraded, while its dangers have been discounted. These causes have reacted so powerfully to establish chloroform's supposed superiority over ether that it will probably take years before it is at all widely recognised that ether is not only a safer general anæsthetic than chloroform, but is not really difficult to manage if once the method of its administration is mastered. In general,

we may affirm that the dangers of chloroform are of such a kind that the utmost human forethought is powerless to avert them, while the disadvantages possessed by ether may usually be wholly obviated by due prevision and careful management of the drug. The need for reopening this much-vexed question is amply shown by the ever-increasing mortality from chloroform. We have before us the records of at least six deaths which appear unnecessary, since in none of the instances does it transpire that any cause existed which prevented the employment of ether rather than chloroform. We are informed, with the melancholy sameness which marks such reports, that in every case the patient was examined before the operation was commenced, and "there was nothing wrong with the heart or lungs"; the patient succumbed "owing to failure of the heart, brought about by struggling whilst being chloroformed." And in cases where a necropsy is made we learn "the heart was found to be a little fatty." Now as such post-mortem reports are not usually made by an independent expert, we cannot place the fullest confidence in the record, since there are but few who would venture to speak authoritatively about post-mortem appearances referable to chloroform without special knowledge and careful microscopic and analytical research. But what is still more unsatisfactory about the results of the crowner's quest in these cases is that we rarely, if ever, find the simple question put, "Was there any reason why ether could not have been administered instead of chloroform?" It is at least a matter of great regret that all deaths resulting from anæsthetics are not investigated by experienced persons, who would collect and tabulate the facts about the phenomena occurring before death, and subsequently conduct a searching necropsy; much valuable information could in this way be accumulated, and its lessons would, we might well hope, tend to minimise the terribly high mortality from chloroform. There is now an abundance of evidence demonstrating beyond cavil that chloroform is a dangerous anæsthetic; it has been shown that dilute solutions, when led through the detached heart of frogs or percolated through the vascular system of a "salt frog," will speedily throw the cardiac muscle into spasm; nor can the muscle be reinstated by withdrawing the chloroform and perfusing a nutrient material such as blood solution, for the heart after one or two recoveries will, if again subjected to the action of the chloroform, be thrown into permanent spasm. There is, then, no question that chloroform possesses the power of producing pathological change in the cardiac muscle. Indeed, NOTHNAGEL has shown that rabbits become the subjects of fatty change in the myocardium as a result of inhalation of chloroform. Some recent researches of UNGAR also throw considerable light upon the matter, although undertaken with the immediate view of elucidating the causation of death from chloroform occurring some time after the inhalation. UNGAR chloroformed dogs for some hours at a stretch for several days and then ceased the inhalations, and found that the animals died at varying intervals after discontinuance of the drug, the post-mortem inspection revealing well-marked fatty degeneration of the heart, kidneys, and liver. In the case of human beings death occurs at three stages: there may be that terrible and sudden dissolution which follows the few initial inbreathings of vapour; while, in the second stage, death is usually said to be due to paralysis of the respiratory centre; and, in the third, it does not take place till some hours after the inhalation. As to the pathology of the first form, we know nothing for certain; and this want of knowledge, and lack of power to predict in whom this terrible accident will occur, render it, we believe, most unwise to incur the risk, except the exigencies of the patient or the surgeon render it obligatory. Of the second form of death we know more, and can usually be sure that it will follow the employment of an excessively high percentage of chloroform vapour to air, or a too prolonged administration leading to saturation. UNGAR'S experiments explain the third, and formulate in exact terms a surmise which KASPAR and LANGENBECK had previously advanced. In the face of such evidence, none of which has been successfully rebutted, it would seem wiser not to persist in the use of chloroform, except in cases where other anæsthetics cannot be safely employed.

IT has long been known to those who have even a superficial acquaintance with the general sanitary circumstances prevailing in different parts of this country that there existed at Cambridge conditions constituting a serious danger to health, and which were the greater reproach because they have prevailed in a centre of learning boasting especially of progress in the various departments of science. But it has remained for those who have access to Dr. BUSHELL ANNINGSON'S recently issued report fully to apprehend how grave are the sanitary conditions of this university town, to which an important proportion of the youth of this kingdom are naturally attracted. Dr. ANNINGSON explains that, in reporting as he does, he is influenced by a deep sense of the responsibility devolving upon him; and, in view of the continuous presence of fatal diphtheria, which has now spread over a period of two years, he fears he may have erred in not pressing with more than his customary force, "the urgent need of grappling with the sewage question," especially in so far as the state of the existing sewers and drains is concerned.

With this significant introduction, he proceeds to show that he does not stand alone in the views he expresses. He proceeds to quote the opinion of the borough engineer and surveyor, to the effect that the most cursory glance will show that "not a single district of the town can be deemed to be in a satisfactory condition"; that, of 371 openings made in the sewers, "seething deposits" were found in no less than 258; that, owing to faulty construction, many of the sewers are "simply elongated cesspools of the worst description, containing sewage in vast quantities in a state of decomposition," and that this putrescent filth permeates the subsoil. Certain specified localities are, according to the medical officer of health, "sewage-saturated areas"; and, in order to bring home the serious evils which exist, to the most unskilled of readers, a series of diagrams are attached to the report embodying samples of the ill-constructed, broken, and leaky drains, opening into sewers, all of which are more or less choked, whilst some are almost entirely blocked with filth deposit.

Reviewing the past history of Cambridge, reference is made to the recurrence of outbreaks of enteric fever and of

diarrhœa; and as regards any contention that, notwithstanding the prevalence of this needless amount of preventable disease, the town has exhibited a generally low death-rate calculated on the "national" system, Dr. ANNINGSON reminds the sanitary authority that he has on many occasions explained this to be a fallacious test of healthfulness, especially in view of the exceptional circumstances of the population of this university town. As already indicated, diphtheria has been extensively present in Cambridge during the past two years, and the immediate causes of its diffusion are stated to be bad sanitary conditions, in addition to social intercourse and school assemblage. During 1886 there were twenty fatal attacks; the disease persisted during the early part of 1887, after which it became more diffused over the town, and was especially maintained in the district where it originally commenced. So far as is known, fifty-one households were affected last year, the attacks including thirty-nine non-fatal cases and thirty fatal cases. We hesitate, however, to accept the statistics as to non-fatal attacks, for to do so would be to credit Cambridge with a diphtheria death-rate of a formidable character, and one which is exceptional even under the grave sanitary circumstances which prevail in that town; indeed, Dr. ANNINGSON very properly suggests that his knowledge of the total attacks must be incomplete.

The story which is told in Dr. ANNINGSON'S report affects, as he himself states, not only the sanitary authority, but the University, and through it the nation at large. It is clearly one of imperial importance, and in view of the many years during which the question of the provision of a proper system of sewerage for Cambridge has been under consideration, it is one that calls for all the publicity which can be given to it. What the present attitude of the Cambridge Improvement Commissioners as to this question is we do not know; but the circumstance that their own medical officer of health finds it necessary to recall to them the fact that in aiming at the removal of some of the more obvious of the existing sources of nuisance, and at preventing the continuance of sanitary evils, at least as regards new houses, he has been recommending the adoption of building and nuisance bye-laws "for several years past," is by no means hopeful for the solution of the difficulty through the agency of the ordinary channels by which sanitary improvements have been so widely carried out in this country generally. It remains for those who have other than mere local interests in Cambridge to take up the question of the sanitary state of this important centre of education.

WÜRZBURG has just supplemented its resources as a medical school by the erection of a new Psychiatric Clinique, under the superintendence of Dr. Rieger, Professor in the University. Besides a spacious auditorium for lectures, it is provided with every means for the study of mental disease and of its treatment approved by modern science. Never fewer than thirty patients, selected, among other reasons, for their clinical and scientific interest, are under Professor Rieger's care.

AT Zürich the International Meteorological Committee has just been holding its sittings, Great Britain being represented by Mr. R. H. Scott, Russia by Prof. Wild, Austria by Prof. Hann, Italy by Signor Tacchini, and Norway by Director Mohn.

Annotations.

"Ne quid nimis."

THE NEW THERMAL SYSTEM AT BATH.

THOSE members of the profession who have been fortunate enough to visit Bath during the meeting of the British Association for the Advancement of Science must be more than gratified by the generous reception they, in common with other members and associates, have received. To medical men the "baths of Bath" have at all times been of interest; but this year the inauguration of a new thermal system of treatment in connexion with the hot springs of this ancient health-resort opens a new era, which bids fair to revive the great popularity of Bath as a fashionable inland watering-place. From the dawn of the Christian era, when this country was first subdued by the Roman legions, the hot springs of Bath have been recognised as possessing medicinal qualities. The gifted conquerors of this country, while they drove before them the uncultured aboriginal tribes, brought with them and left behind them the arts of civilisation and refinement. In no spot in the kingdom can the remains of these arts and refinements be traced more fully than in the ancient city of Bath. This is due mainly to discoveries made by members of the medical profession. In the year 1755, Dr. Lucas, a physician of local eminence, found the ruins of Roman baths surpassing in extent and magnificence anything discovered before or since elsewhere in the kingdom. He conjectured that still greater discoveries would probably be made at Bath. His predictions have been verified. In the years 1799 and 1803 some further examinations revealed extensive subterranean Roman remains, which proved to be a series of magnificently constructed baths. In an account written in 1822 by Dr. Spry full credit is given to his predecessor. He speaks of the discovery as revealing "a specimen of grandeur and magnificence which would do honour to Herculaneum, or even Rome herself, accidentally discovered in the highest state of preservation." But the still greater treasures remained hidden, and it was not until the year 1871, less than twenty years ago, that the full extent of these magnificent remains was investigated. They were found buried beneath some of the poorer houses of the city, and filled in by the refuse of past centuries. Within the past ten years the municipal authority of Bath has earned the gratitude of the historian, the antiquarian, and especially that of medical men and their patients. A light is thrown by these discoveries on the thermal system practised by the Romans in this country. Their oblong and circular baths as exemplified at Bath, with their corridors, dressing cubicles, and appendages, might be taken as models for public baths for the present day. The proportions are almost faultless, and the ornamentation in stone carving and mosaic flooring exquisite. With commendable enterprise and judgment, some of these have been reproduced in a new and extensive system of baths, with every modern contrivance for the thermal treatment of disease. Whatever could be found that was remedial in the continental system of baths has been adopted here, regardless of difficulty and outlay. Future generations will be thankful to the medical men of Bath, and to the municipality which has acted on their suggestions. It would be invidious to mention names, even of those known to have been the most active.[1] Those interested in the future of Bath should not lose sight of the fact that, notwithstanding the great natural advantages derived from the abundance of hot water springs, and the accepted medicinal virtues of the water, it is largely to their judicious administration

[1] Fuller information can be found in a work just issued from the press, entitled "The Thermal Baths of Bath," by H. W. Freeman, F.R.C.S.

and skilled local application that their efficacy is due. The success or failure in any particular case may appear "next to nothing" in the repute of a medicinal system. The gist of Sir Frederick Bramwell's presidential address at Bath was to the effect that most great ends were accomplished by attention to "next to nothing." These three words have been repeated in most of the discussions, and have become "household words" in Bath during the Association week. We hope they will be retained there. Much has been accomplished in the city, but there remains still more to do if Bath is to regain and maintain her former prestige as a fashionable health resort. There must be adjuncts to the thermal system treatment. Bath is not deficient in open spaces and pleasure grounds, but none of these, unfortunately, occupy the situations where open space is most needed. Around the new baths and unique Roman remains pleasure grounds should be constructed for the invalids, and an enclosed "winter garden" has become a necessity. A pleasant lounge and some amusement may to the uninitiated appear "next to nothing" in the treatment of disease; but to the initiated they are known to be very important adjuncts, and in the estimate of the invalid essentials.

THE DEATH-RATE OF THE ARMY.

A CORRESPONDENCE, which, perhaps, may be fairly described as more amusing than instructive, has been carried on in *The Times* on the subject of the relative death-rate of the German and British armies. A daily paper having commented on the death-rate in the German army being lower than in our own, notwithstanding the "unexampled expenditure per head on the maintenance of our army," Mr. Kavanagh, of the Army Medical Staff, wrote to *The Times*, expressing his surprise at a comparison being made between an army enlisted at home and serving at home with one of which a large proportion is serving in India and the colonies. Comparing the death-rate of the troops serving in the United Kingdom with that of the German army, he finds that they are nearly the same. But he then, by a curious process, makes out that the death-rate of the army abroad is only 4·8 per 1000. "Taking the death-rate at home from the total death-rate, we find that 4·8 represents the deaths per 1000—i.e., far below the German rate." This letter drew an answer from a correspondent under the signature of "Medicus," who pointed out the absurdity of the method by which the result was obtained, but who does not seem to be much better acquainted with the method of obtaining an accurate ratio, for he says, "The true answer is of course 15·56 per 1000." He does not state how he arrived at this conclusion, but he seems to have taken the difference between the total death-rate and the home rate and added it to the former! If the numbers of the men serving at home and abroad had been identical, the result would have been accurate, but they were not. "Medicus" has evidently committed the mistake of making his calculations upon ratios of unequal quantities, instead of upon the actual numbers. Calculated upon the figures given in the Army Medical Reports, the ratio is 15·45 per 1000. "Medicus" has also quoted statistics from the Report of the Registrar-General to show that the death-rate of the army at home differs but little from that of civil life, but though the conclusion is probably not far from the fact, the mode in which the figures are stated by him is manifestly wrong. With regard to the subject which has given rise to this discussion, we would merely observe that one important element in forming an accurate comparison is wanting—the relative age-distribution of the men composing the two armies. A difference in this would probably account for any slight difference which is shown in the death-rates.

THE TRADES UNION CONGRESS AND "THE LANCET."

WE note with pleasure that the representatives of the organised working-class trade societies of this country have duly appreciated our efforts to defend those of their order who are the victims of the sweating system. The present annual Trades Union Congress is apparently the largest and most influential gathering of the sort that has ever taken place; and, from the very first day, the grievance arising from the sweating system was forcibly put before the delegates. A great portion of the opening address delivered by the president, Mr. Shaftoe, dealt with the subject. The facts he brought forward, and the prices mentioned as being paid to the workers in sweating shops, coincided with what was described in our special reports on the subject. But, what is of greater importance, there was equal approval of our suggested remedies. Mr. Shaftoe urged that it was now generally agreed that the 69th clause of the Factory Act should be abolished, and factory inspectors thus enabled to enter private houses, bedrooms, or places in which goods are believed to be in process of manufacture; and he added that "it is obvious this would enormously check the sweating system." The President then, referring specially to our reports and articles, remarked, amid the applause of the Congress, as follows: "A valuable suggestion has been thrown out by THE LANCET on this subject, which should merit careful consideration. It is that municipalities should build special workshops for such trades, whereby proper light, ventilation, and sanitary accommodation could be secured. Such places could be let at a fair rent, and would thus be no pecuniary loss. This proposal will no doubt be carefully considered by you, as it offers at once a reasonable solution of the sweating difficulty, with a genuine chance of mitigating the evils of overcrowding. It is, however, only a public duty on our part to thank THE LANCET for the valuable service it has rendered to the cause of labour by exposing the iniquities of the sweating system, and the able papers of its Special Commissioners have done much to raise popular indignation."

TREATMENT OF TYPHOID FEVER.

IN compliance with the request of the Sydney Board of Health, Dr. W. Peirce, medical superintendent of the Coast Hospital, has reported upon the treatment of cases of typhoid fever, of which the rate of mortality during the first five months of the present year has been unusually low. Dr. Peirce, in his memorandum, states that, in cases received within the first ten days of the disease, calomel (three to five grains) is administered; and after that acetanilide, in five-grain doses, whenever the temperature exceeds a certain point (101° to 103°), up to six or eight times in the twenty-four hours. The effect of this is to cause a fall of temperature in about forty minutes, attaining its minimum in from two to four hours, with concomitant fall in the pulse and respiration rates, with decrease of arterial tension and profuse sweating. The tendency to delirium is diminished, and there is "a remarkable feeling of ease and repose, which appears partly to depend on the production of a certain amount of peripheral anæsthesia." When the effect of the drug passes off, the temperature often rises with great rapidity. He considers this treatment to have many advantages over cold bathing. He has given the drug continuously for several weeks, and has not found it contra-indicated, even when there were cardiac complications. It renders the course of the fever milder, but it may not lessen the duration of the disease. In all cases where it is freely given there is liability to occasional cyanosis of extremities and face, with irregular pulse. Alcohol was given very sparingly, and generally only in cases of failing

heart; and Dr. Peirce thinks that the prolonged use of alcohol is very injurious. He also describes the measures employed to combat the various complications. At the meeting at which the report was read the Board of Health passed the following resolution: "That the Board of Health desire to record their appreciation of Dr. William Peirce's very able report on the subject of typhoid fever, and the reasons which have led to the small mortality in the Coast Hospital, of which institution he is the medical superintendent, during the first five months of the year 1888."

LUNACY STATISTICS.

THE statistics published year by year in the reports of the Commissioners in Lunacy, numerous as are the tables supplied, are still deficient in much of the information necessary for arriving at sound conclusions as to the frequently asserted increase of insanity in England. Among the more important defects in the statistics of the Lunacy Report may be mentioned the omission of any information as to the ages of the insane, without which it is impossible to calculate the true effect of the undoubted accumulation of inmates of asylums in recent years, due to the marked decline in the recorded death-rate in these institutions. This most important defect in the statistics given in the report of the Lunacy Commissioners has been constantly pointed out in these columns, and elsewhere, during the last fifteen years, and yet up to the present time no attempt has been made to supply the deficiency. It is essentially necessary to consider fully and carefully the element of age in all conclusions based upon any vital statistics, and this is especially necessary in the case of lunacy statistics, from the more or less necessary defects in the materials from which those statistics are constructed. To take an example: The facts and figures published by the Commissioners show that on Jan. 1st in this year 270 of each 100,000 of the male population of England and Wales, and 306 of the same number of females, were known to the Commissioners to be insane. These figures, to the uninitiated, are frequently taken to signify that females are more liable to suffer from insanity than males, whereas they are, as has been frequently pointed out, absolutely worthless for deciding the relative liability of men and women to insanity. A knowledge of the ages of the insane population of each sex, moreover, shows clearly how fallacious would be the conclusion suggested by the ratios given by the Commissioners. In the census report for 1881 is given a small table showing the number of insane males and females, at successive age-periods, per million of population enumerated in 1881, of corresponding age and sex. This table shows that at all ages the numbers were 1874 of males and 2107 of females. An examination of the separate age-periods, however, shows that up to forty-five years of age the proportion of lunacy among women is smaller than among men. Between twenty and twenty-five years of age the proportion per million, in 1881, was 1037 among males and 894 among females; and between twenty-five and forty-five years, 3298 among males and 3117 among females. Above forty-five years, owing, as we may safely assume, to the much lower death-rate among female than among male lunatics, the excess in the female proportion of existing lunatics appears. Between forty-five and sixty-five years the proportion of lunatics per million was 5029 among males and 5965 among females; while over sixty-five years the proportion among males fell to 4776, while that among females further rose, owing to accumulation, to 6137. The census report also calls attention, in explanation of these figures, that in the ten years ending with 1881 the annual death-rate among the male insane was 11·94 per cent., while among the female insane it did not exceed 8·13 per cent.; and, further, that the recovery rate was 10·50 per cent. among males and 11·59 per cent. among females. Thus the discharge rate (including deaths and recovery), which was 22·44 per cent. among males, did not exceed 19·72 among females. Hence, obviously, the far greater accumulation among females than among males, causing the larger proportion of existing cases among females of all ages, notwithstanding the evidently smaller number of cases of attack among females, judged by the proportions at the earlier age-periods. The Census Commissioners further show that, in order to maintain the same proportionate numbers of insane in each sex as was enumerated at the time of the census, there would have to be annually 756 new cases of male insanity against 661 new female cases, implying that of equal numbers living of each sex there are 106·8 new cases of male insanity to each 100 of new female cases. These figures probably represent approximately the comparative liability of the two sexes to be attacked by lunacy.

A CENTRAL MORTUARY FOR LONDON.

A PLEA has been made for a central mortuary for London, or rather for a central "morgue," where the dead may lie exposed to view, as in the morgue in Paris. This demand is based upon the requirements of justice, and the argument is used that the victim of a murder may have been seen by some passer-by at a moment which it may be important to fix in connexion with other points in the case, and that the passer-by should have convenient opportunity for inspecting the dead, and correcting or confirming his impression that the person seen is the deceased; as evidence that this opportunity is now wanting, the story is told of the refusal of the police to allow the body of one of the recent Whitechapel victims to be seen. We may point out that, to meet a requirement of this kind, not one but several morgues would be needed. For the purposes of identification and for obtaining evidence, it is desirable that the body should be within easy access of the inhabitants of the district in which the crime is committed; but it is doubtful whether the exposure of the deceased to the public gaze would really aid in the detection of crime more than would the giving of facilities for the body to be inspected by those who can allege a sufficient reason for their desire. It is not desirable to make a public spectacle of the victim of a crime. In doing so, it is doubtful if there would be any other result than the gratification of a morbid curiosity which would not be without harm to public morality. At the same time, the difficulty which is now said to stand in the way of the inspection of a body should be removed; but something more than the satisfaction of mere curiosity should be required in support of an application to enter a mortuary.

CONJUNCTIVAL PEMPHIGUS.

ONLY twenty cases of this disease are on record according to Dr. F. Gosetti, who read a paper on the subject at the last meeting of the Royal Institute of Science at Venice, and of these all led to complete and irreparable blindness from the transformation of the conjunctiva and cornea into inodular or cicatricial tissue. Having described a similar case which had recently occurred in his practice, Dr. Gosetti remarked that previous observers of "conjunctival pemphigus" admitted that in the morbid process manifested in the eye concurrently with, or in succession to, the appearance of that dermatosis on other mucous membranes, they had never detected either on conjunctiva or cornea any eruption even distantly resembling the bullæ of pemphigus, which, when that disease affects the mucous membrane of the nares, for instance, or of the buccal cavity or the pharynx, present themselves in their characteristic bleb-like form. Dr. Gosetti maintains that the atrophic puckering

of the conjunctiva and the cicatricial degeneration of the cornea observed in such rare cases of pemphigus do not constitute a distinct nosological entity, but are to be attributed to the process known under the name of xerosis parenchymatosa of the conjunctiva, which is itself the final result of a grave inflammatory process affecting the mucous membrane of the eye, such as trachoma and conjunctival diphtheritis. The influence of the dermatosis bullosa in determining the ophthalmic phenomenon in question would, according to Dr. Gosetti, be sufficiently defined as a local trophic disturbance (*perturbazione trofica*) due to general disease of a marasmatic kind (such as pemphigus undoubtedly is), and affecting the conjunctival tissue. This trophic disturbance, with the consequent inflammatory process and the eruption of the bleb-like vesicles on the mucous membrane of the palpebræ, would result in the atrophising sclerosis and the irreparable blindness that follows it.

THE JESMOND OUTBREAK.

MR. HENRY ARMSTRONG has recently presented to the corporation of Newcastle-on-Tyne a report on an outbreak of scarlet fever, the cause of which was, after a careful examination of all the circumstances, attributed by him to the use of milk from a special dairy, the infection having been received, after the milk left the cow, directly or indirectly, from the children of a carman, whose children were declared to have had neither scarlet fever nor sore throats, whereas in three cases redness of fauces, enlargement of tonsils, &c., were discovered. The area of the incidence of the disease is described in the report, and it is shown that up to a certain date and among the consumers of the milk 116 cases of scarlatina or of other form of sore throat were certified, the attacks being spread over sixty-three households. Roughly speaking, Jesmond-road may be taken as the centre of the affected area, there having been as many cases to the south of it as to the north; and, as regards that area, it is reported that, under the circumstances which led to the disease, structural sanitary defects were in no way the cause of it. Since the issue of the report some doubts have been expressed as to the source of the infection, and it is stated that the Jesmond district is one where there have been numerous complaints as to sewer and drain ventilation, and that it is by no means a locality the sanitary state of which is above suspicion. On the other hand, it is contended that, though perfection cannot be claimed for the sewers of this district, they are in good and efficient working order. The subject has given rise to considerable local correspondence, and the city engineer has prepared a report on the subject, in which he admits that "nasty smells" and "foul smells" occur and have been complained of, yet "sewer gas" has not been detected. Thus, he writes: "Foul smells? Yes, and in considerable variety and vigour. Sewer gas? No." And he explains, so far as we can understand him, that foul smells from a sewer refer to recent sewage smells, and that sewer "gas" comes from stale and decomposed sewage. As regards the latter, he proceeds to express his belief that not one person in ten in Newcastle has ever smelt "real sewer gas." Unfortunately, he goes on to admit "nasty drain smells." He then explains that it is a common practice to lay house drains with little or no fall, with gaping joints, &c., and that from these and other causes the drain pipes at times get half-filled before there is sufficient force behind to drive the accumulated stuff into the sewers. Thus he admits the very conditions which tend so often to make public sewers not only foul but dangerous; indeed, there are few circumstances which more effectually foul sewers than that very retention of sewage in drain pipes, which is admitted to cause sewer "gas," and, by reason of the resulting decomposition, to be dangerous if it takes place in the sewers. We fail to see how a district which has its sewers fouled by offensive and decomposed drainage, which is only periodically jerked into them from drains which are little better than cesspools, can be held up as free from danger. The sewers themselves, and apart from the drains which join them, may be free from suspicion, and to this extent one of the contending parties may be right; but blocked and ill-constructed house drains are, as a rule, a greater source of danger than mere faulty sewers, for they are in much more intimate communication with dwellings. And Mr. Armstrong is doubtless also perfectly correct. He held that, milk being the cause, the disease was not found to be associated with any structural defect; and he was probably largely influenced in his opinion by the fact that scarlatina is not a disease the cause of which can be satisfactorily traced to sewers and drains, even when these are admittedly faulty. The case seems to us to be one in which there is truth on both sides; but also one in which there is overwhelming evidence that the surveyor's report as to the number of "badly laid house drains" calls for definite action on the part of the sanitary authority, if a favourite residential quarter is to maintain the standard of health which it appears to claim for itself.

MEDICAL CANVASSING.

WE must again enter our protest against the system of canvassing electors and governors for medical appointments to hospitals and public institutions which is still in vogue in country towns, and also, we regret to say, in London. Some of our readers have tried it, and know what it means beyond a waste of time and money, which can often be ill afforded. Then, again, the governors of a hospital are usually unable to judge as to the special fitness of a candidate for the vacant post, the meaning of medical terms and the distinction between those of a similar sound being unknown to them. Moreover, they do not understand the duties connected with the post which they propose to fill, or the value of the appointments which, having been previously held by the candidates, qualify for such a post. We venture to state that there are few hospitals the governors of which take sufficient trouble to visit even the out-patient department and see the work done there, or follow a surgeon's visit and see what it means for good. They attend occasional board meetings, some of them even with regularity; they may look into a ward and speak to the sister, a nurse, or a favourite patient; their name is on the list of governors of the place; they subscribe to its funds; they feel that they have done what is expected of them. A vacancy occurs amongst the staff, and a friend writes: "Support So-and-so, he is a nephew of mine"; a Royal personage writes, or one whose influence is great, and the vote goes accordingly; besides, it saves trouble. We would not say that there are not some who do consider the patients as well as themselves; but, alas, they are few. The right to elect gives them an increased sense of importance, and they do not appreciate their own relative ignorance of the qualifications of the candidates. The medical men attached to the hospital are undoubtedly the best judges, and it should be left to them to recommend for the election, the committee still retaining the actual power to elect, canvassing being forbidden. This method is employed at most of the large London hospitals, and works admirably. The staff are as jealous of the honour of the hospital as the most enthusiastic of governors, and are much better judges in every way of the merits of their future colleague. It seems to us derogatory to the dignity of the profession that members thereof should be compelled to visit and extol, to gentlemen not in touch with the medical sciences, the numerous perfections possessed by the visitor—that is, if

opportunity be given of doing so. We must leave it to the profession to see that the opportunities of similar events occurring are diminished, for its members will have to take the first step in bringing home the truth of the matter to the governing bodies of the institutions where this system of canvassing, so humiliating to men of high principle, is still extant.

THE DIET OF THE SOLDIER.

IN commenting lately on the diet of the soldier (THE LANCET, Aug. 11th), we pointed out the necessity for an efficient system of supervision as to the quality of the meat delivered by the contractors, and suggested that instruction on this subject should be given at the military colleges. We observe that a very mild attempt in this direction has been made by the military authorities. A General Order has been issued directing the formation at Aldershot of "classes for the instruction of officers as to the method of judging of the quality of provisions, forage, &c." There are to be four such classes in the year, and the course for each class is to last a fortnight. One officer from each regiment of cavalry, division of royal artillery, and battalion of infantry stationed at Aldershot is to be detailed for attendance on the course. A limited number of officers from out-stations will be permitted to attend, but, rather unfairly, they will be required to pay their own expenses, quarters being provided for them if available. This is a step in the right direction, but it is a very inadequate provision for the supply of a great and serious want. We trust that the authorities may see their way to extend the sphere of instruction beyond the camp at Aldershot. There can be no reason why such classes should not be organised at all the camps and large stations. But in addition it seems imperatively necessary that instruction on this important subject should be given at Woolwich and Sandhurst, so that officers on joining the army should be qualified, at least educationally, to discharge a duty which involves so much of the health, efficiency, and comfort of the soldier. We trust steps will at once be taken to ensure this most desirable improvement. We would suggest to those gentlemen who devote themselves to the task of preparing candidates for commissions that it would redound much to their credit if they added instruction on this point to their present course. Such a step would, we believe, be fully appreciated by all who take an interest in the welfare of the soldier.

SMALL-POX IN FRENCH TOWNS.

IT appears from the monthly statistical return issued by the French *Bureau de l'Hygiène Publique* that small-pox mortality during last year was nearly eight times as fatal in the principal French towns as it was in the largest English towns. France at the time of the last census in 1886 contained fifty-one towns with a population exceeding 30,000 persons, and the statistical return above mentioned shows that during the twelve months of 1887 the reported deaths from small-pox in these towns were 1956, and equal to a rate of 0·31 per 1000 of their aggregate population. In the twenty-eight large English towns dealt with in the Registrar-General's Weekly Return, each of which had at the time of the last census in 1881 a population exceeding 70,000 persons, only 332 deaths from small-pox were registered during last year, giving a death-rate of but 0·04 per 1000. Comparing Paris with London, we find that 389 deaths occurred in the former city to 9 in the latter, and, corrected for difference of population, there were 85 small-pox deaths in Paris to 1 death in London. The only large English town in which any approach to epidemic prevalence of small-pox occurred last year was Sheffield, where the rate was 0·88 per 1000; while it may be noted that the death-rate per 1000 from this disease was 1·21 in Nice, 1·37 in Toulouse, 2·84 in Avignon, 2·98 in Calais, and 3·58 in Brest. In the first six months of this year the death-rate from small-pox in these French towns exceeded that which prevailed in the first half of last year; it was equal to 0·42 per 1000, while in the twenty-eight English towns in the same period it was 0·12 per 1000. In Paris 185 deaths from small-pox were recorded, while in London, with nearly double the population, the number was only 5. The epidemic showed increased intensity in Brest in the six months ending June last, causing an annual death-rate of 5·22 per 1000; the small-pox rate was also equal to 1·01 in Grenoble, 2·09 in Montpellier, 2·18 in Havre, 2·73 in Lorient, and 11·24 in Cette, a town with a population of nearly 40,000 persons. Unfortunately these mortality statistics do not date back further than the commencement of last year, and it is therefore doubtful whether France is now suffering from an epidemic wave of small-pox, or whether the rates referred to above as prevailing in the French towns during the past eighteen months represent the normal mortality from this disease in the urban population of France.

THE REPEAL OF THE CONTAGIOUS DISEASES ACTS: A SUGGESTION.

MR. ALBERT BENTHALL, M.R.C.P., of Southsea, has sent us a letter respecting the Contagious Diseases Acts and the disastrous effects of their repeal. He says—and we can readily believe it—that no one who is not practising in a garrison town can have any conception of the evil. But he and others who wish to make suggestions on this question must not ignore the fact that the evils resulting from venereal diseases are by no means limited to garrison towns and naval seaports, but are felt more or less in all towns and cities. It was the very limited area of the operation of the Contagious Diseases Acts which neutralised so very much their good effects, and gave them a partial character. Their effects in diminishing disease was beyond dispute; and as the civil population of the garrison towns and naval seaports to which they were applied experienced the benefits of these Acts, it was a grievous mistake not to extend them, or at least to give local authorities the opportunity of applying them. It was this timidity on the part of former Governments which led to the subsequent suspension and repeal of the Acts. Mr. Benthall considers that nothing can be done on the basis of the late Acts, and he suggests the compulsory examination of males. "That any male of immoral habits should be required to produce a certificate not more than three days old, from a legally qualified medical practitioner, stating that he is free from infectious disease. That any woman could demand production of this certificate, and if it was not produced, inform the police. The man to be fined £5. Half to go to the informer (!). That any man found to be suffering from contagious disease should be sent to hospital and detained until cured." This suggestion is so utterly impracticable that our only object in publishing it is a desire to give publicity to every suggestion honestly made with a view to prevent disease, and in the hope of something more practical being suggested. Mr. Benthall has fallen into two errors. One is that the Acts were directed against one sex—i.e., the female,—which is untrue. They were directed against common prostitutes, a proportion of the female sex who make a trade of prostitution, and by whom the greater amount of venereal disease is created and propagated. The second error is that men are equally guilty with prostitutes in spreading disease, which is a wholly untenable proposition. That women are unfortunately infected by men is too true; but while any one man cannot, for obvious reasons, infect more than comparatively few women, there is no limit to the number of men whom one prostitute may infect. Mr. Benthall believes that his

proposal would not only decrease disease, but would largely prevent immorality, especially among youths and those who are not wholly vicious. If he will refer to the series of leading articles published in THE LANCET in 1885 and 1886, he will find all the arguments in favour of and against the Contagious Diseases Acts fully given, and every objection fully met. Evidence is rapidly accumulating which shows the disastrous effects which the repeal of these Acts has had upon the men of the army and navy, a condition of affairs which will probably go on until the much-enduring British taxpayers again complain loudly. Then will the Acts probably be restored, since there is no other effectual means of preventing venereal disease than the compulsory periodical examination of all known prostitutes.

PROGRESSIVE OPHTHALMOPLEGIA.

THE commonest cause of progressive ophthalmoplegia is syphilis or independent degeneration of the nervous centres. M. Meyer has examined a man, aged sixty-two, who was the subject of blepharoptosis and absolute immobility of the ocular globes, which were somewhat protruded and a little divergent; but accommodation was said to have been intact. The corneal reflex was notably diminished, but no other nervous symptoms existed. A granular fatty degeneration of all the motor nerves of the eye was discovered on microscopical examination, and the muscles were in process of fatty and granular atrophy. The optic nerve, ophthalmic ganglion, and the fibres of the sympathetic presented no appreciable lesion. A peripheral neuritis was observed also in the phrenic nerve, in a great number of the intercostal nerves, and in different muscular and cutaneous nerves of the fore-arm, arm, and leg. The hypoglossal and the glosso-pharyngeal were much changed, and also the pneumogastric, the recurrent, the superior laryngeal, and sensory branches of the trigeminal. There were no changes in the central nervous system. Although the man was much wasted and very tired and weak, further motor or sensory symptoms were wanting; no mention is made of the faradaic reactions of the muscles. In connexion with the disease of the phrenic nerve, the existence of a bronchial dilatation with much expectoration is interesting. Unless the cachexia gave rise to the multiple neuritis, the source of the changes does not seem obvious.

THE REVOLVER.

OF late years the custom of carrying firearms, to be used in case of improbable need, has become inconveniently common in this country. It is easy to understand that such a handy weapon as the revolver is essential to the soldier or the traveller in lands where law is but a name. In the more settled state of society with which we are familiar the necessity is, to say the least, open to question. The danger of bodily injury to which private persons are occasionally liable at the hands of idle ruffians is not, indeed, a mere delusion. On the other hand, it is not so pressing that it must be met by supplementing the services of an efficient, if not too numerous, police by a readiness on the part of individuals to take the law of life and death into their own hands. Even in the case of the police themselves, whose duty it is to seek and meet the criminal desperado on his own ground, the revolver has, we believe, not hitherto been adopted as a needful armament. The reason for this is not that it might not in certain cases have rendered valuable service, but that the necessity for its use has hitherto been quite exceptional, while the temptation to resort to it in conditions of less absolute urgency might at times be too much for human endurance. This forbearance on the part of the authorities is, on the whole, certainly commendable. Some persons with whom the pocket revolver has become a familiar friend would do well to copy their example. Human nature at its best is not absolutely reliable. Should it, then, be trusted in the event of sudden assault or other provocation to deal justice only to the offender? Can it be depended on to repress, if needful, the temptation to reply with a hasty bullet? We may safely say not, and experience teems with incidents which confirm our statement. It is probable that public safety would gain considerably if a heavy tax were placed upon a weapon which has been so often the ready means of murder and suicide.

CONSTANT WATER SUPPLY.

THE Corporation of the City of London have published a report giving their reasons for not complying with the petition from various City parishes asking them to obtain a constant water supply for the area under their jurisdiction. The reasons are that the water company would require that every house should be provided with the requisite fittings, and that it had been found in St. Pancras that this would entail a cost of £5 in each case. The fittings which would be required are those which are specified in regulations approved by the Board of Trade. These requirements do not relate specially to constant water supply, but appear only to be enforced when a demand is made for constant service; then the water company begins to enforce its rights, and householders who have in ignorance allowed other fittings to be placed in their houses are compelled to make expensive changes to meet the wishes of the company. Thus the company is able to hold the threat of expense over any district desiring a constant service. Mr. John Hamer, the honorary secretary of the Mansion House Council, has contrasted the behaviour of the two water companies supplying the parish of St. Pancras. The West Middlesex Company only demanded an alteration in fittings when this was absolutely necessary—that is, when they gave rise to waste of water; the New River Company, on the other hand, appear to have insisted on an alteration whenever the fittings were not of a kind prescribed in the regulations; hence the demand of the vestry for constant supply has entailed upon the inhabitants resident in the former company's area almost no expense, but in the area of the latter company an enormous cost. The Corporation of the City have to deal with the New River Company only, and they are therefore fully justified in telling the citizens of the expense to which they will be put; but they will doubtless bear in mind that, had the City been supplied by another company, they could have had the boon they sought without the expense.

THE BURIAL OF STILLBORN INFANTS.

A CASE which came before the Portsmouth magistrates on the 6th inst. shows how completely the wisest provisions of the law may be nullified by the laxity of those whose duty it is to enforce them. Until the passing of the Amended Registration Act of 1874 there were no regulations whatever for the burial of stillborn infants, except such as the authorities of each burial-ground might choose to make for themselves. By that Act it was provided that before the body of any infant was buried as that of a stillbirth, or still-born infant, a certificate or declaration to that effect should be produced or made. It is the general practice throughout the country to adopt a sliding scale of fees for burials, increasing according to the age, the difference between that for a stillbirth and for a deceased infant (however short-lived) ranging from eighteenpence to seven shillings and six-pence, or even more. Dr. Johnson used to remark that "there was a time in his life when sixpence was a very serious consideration for him." It is a very serious consideration now for poor people, and it is greatly to be wished that this temptation to fraud could be removed by having a uniform

fee for the burial of the bodies of all newly-born infants, whether they shall have been stillborn or survived their birth. In the Portsmouth case, the midwife present at the birth was the person charged. Though she saw the child born living and surviving its birth one hour and a half, she gave a certificate of stillbirth, and succeeded in getting it buried as such. It would also appear that this was a usual practice with her, and that the official in charge of the Mile-end Cemetery at Landport was entirely ignorant of the provisions of the Act of 1874. According to his own statement he buried, at a rough guess, from 100 to 120 bodies of infants every year without medical certificates or the requisite declaration. This is a circumstance calling for an inquiry from the Home Secretary. It is needless to point out the terrible effects of such a loose system of burial, and we note with satisfaction that the defendant was fined £3, or in default a month's imprisonment. The magistrates also expressed great dissatisfaction at the entire ignorance of the provision of the Act shown by the official of the cemetery, characterising this loose manner of burial as most reprehensible. Copies of those clauses of the Act which relate to the burial of infants ought to be in the hands of every official in charge of a burial-ground, and should also be placarded on the office wall, for the benefit of midwives and others who are ignorant of the Act and its penalty clauses.

WEST HARTLEPOOL CEMETERY AND POSSIBLE WELL POLLUTION.

THE proposed extension of the cemetery at West Hartlepool has given rise to fears that pollution of the public water supply might result if it were carried out; and Dr. Gourley, the medical officer of health, has expressed apprehensions as to this. He has explained that the water supply is drawn from a well in the magnesian limestone, situated about 400 yards to the eastward of the proposed extension, the depth of the well being some 200 feet, and the level of the water having been reduced by pumping; and he has stated that there are apprehensions of danger of the infiltration of putrid animal matter into the well, and hence serious risk of dangerous contamination of the public water source. Amongst other matters, he has further pointed out that the land between the proposed cemetery extension and the waterworks has been made up with refuse material, in itself dangerous to health. Mr. R. E. Middleton, Mem. Inst. C.E., has in consequence dealt with the matter at some length, and he has arrived at a number of conclusions in the main adverse to this view. He points out that the proposed cemetery site consists of a band of clay varying in thickness from 26 ft. at its eastern end to 17 ft. at its north-western end; that bore-holes show it to be impervious to water; that burials can be so arranged as to leave a bed of clay not less than 10ft., which shall not be pierced; that the waterworks do not draw their water from any of the upper strata, but from beds below, and hence that pumping produces no scour in the upper strata; and he draws the conclusion that the proposed cemetery extension is not liable to produce contamination of the water supply. At the same time, he urges the construction of certain drains around and in the cemetery, and he points to the risk which is incurred by the deposit of town refuse where the stone crops out, and by reason of cesspools. The report which he has prepared seems to exonerate a cemetery in the proposed situation from doing possible harm; and as we believe that Mr. Middleton's services have been called in as an independent expert, the greatest weight should be attached to his opinion. But there has recently, in more cases than one, been a tendency to construct cemeteries for the dead without proper regard to the enormous interests of the living in the important matter of water supply; and if, locally, doubt is still held as to the possibility of danger arising from a cemetery in the intended position, the present is the time for exhaustive inquiry by some skilled geologist who has made the subject of water supply a special study. Under any circumstances, Dr. Gourley will have the satisfaction that his attitude has secured the consideration of a number of reasonable doubts, and that it has enabled those doubts to be dealt with before it had become too late.

SMALL-POX AND VACCINATION.

A REPORT of Dr. Mumby, medical officer of health for Portsmouth, has met with some local criticism for the reason that it contains photographs illustrating the appearance of a vaccinated and unvaccinated person respectively when suffering from small-pox. Distasteful as the illustrations may be, they honestly show the disease in its two forms. The opponents to vaccination undoubtedly meet with success because small-pox is rarely seen at the present time by the majority of English people, and its terrors have therefore ceased to have the influence which they possessed in pre-vaccination days. If opponents of the Vaccination Acts could be made to see in small-pox hospitals the terrible disfigurements from this disease which result when unvaccinated persons are attacked, their objections to vaccination would receive a rude shock. What small-pox can do in an unvaccinated community may be learnt from the story which is told concerning Morocco. It is stated that some twenty thousand people have fallen victims to this disease; in a single town, Rabat, thousands are believed to have died, the panic-stricken people flying in all directions from the infected district. When it is considered how gladly these poor creatures would avail themselves of the protection afforded by vaccination, it is painful to read that at Luton the guardians are refusing to enforce vaccination, and have returned a discourteous reply to the Local Government Board, who had called their attention to the fact that less than half the children had been vaccinated who had been born in that district during the period from July to December last year. Unfortunately, the Luton board are not exceptional, for we learn that the Gloucester board of guardians have also adopted a resolution that there should be no prosecution of nearly five hundred persons who had neglected to have their children vaccinated.

WOOLWICH AND SANDHURST.

THE Reports of the Board of Visitors upon these two national military schools have just been published, and afford as little information as possible respecting the health of the cadets. It is true we are told that at Woolwich the Board "observed with much satisfaction their bright and healthy appearance," but it would have been much more satisfactory if the usual numerical details respecting the amount and nature of the sickness which had occurred among them had been furnished. The number of cadets at the date of inspection was 252, "being 50 over the establishment." The report states that "the total number who have been admitted to hospital was 130, or an average of 1·61 per cent."; we should rather have been disposed to say it was 51·6 per cent. On the inspection day there were 8 sick in hospital, or 3·17 per cent., which appears to us a very high ratio. No information is given as to the diseases for which they were under treatment. It is also stated that during the year eight lost a term through sickness. Of Sandhurst, the Board report that the health of the cadets during the year has been good, and their appearance and physical condition all that could be desired. At the date of the examination the number was 306, excluding one rusticated. The admissions into hospital during the year were 112, or 36·6 per cent., which contrasts

favourably with the proportion at Woolwich. The average constantly sick was in the proportion of 1·23 per cent.; on the day of inspection the number in hospital was three, or ·98 per cent., as against 3·17 at Woolwich. At Sandhurst only one cadet lost a term through sickness. We have on previous occasions called the attention of the authorities to the marked difference in the health of the cadets in these two schools, and suggested the propriety of an inquiry into its causes, but the only result of our suggestion appears to have been the suppression of the reports of the medical officers. It is no doubt unpleasant to the military authorities to have such matters discussed, but we feel satisfied that the best course they could adopt in the interests of the army would be to give full and satisfactory information on the subject, and take advantage of any criticisms, favourable or adverse, to improve the sanitary conditions of the establishments, even although that might involve an increased expenditure.

THE SANITATION OF POOR DWELLINGS.

THE Mansion House Council on the Dwellings of the People are steadily persevering in their efforts to improve the sanitary condition of London districts, and, thanks especially to the attention which their representations to the Home Office have received, they are meeting with considerable success. At a meeting held last week at the Mansion House, it was stated that the inquiry recently held in Bethnal-green had led to the most satisfactory results, while in some other parishes the local authorities had shown much willingness to remedy any defects pointed out to them by the Council; in Shoreditch especially evils found to exist had been promptly remedied. Special inspections had been made in Woolwich and portions of Plumstead and Bromley, showing the need for more active sanitary administration in those areas. The next Home Office inquiry will be held at Rotherhithe, and the Council have appointed two gentlemen to represent them thereat. A striking instance of overcrowding was brought to light by an inquest held last week in Spitalfields concerning the death of a child aged four months. The baby, who had died from suffocation, had shared a room about twelve feet square with six other children and its parents—that is to say, each person had but a little more than a hundred cubic feet of air space; and for this miserable accommodation a charge of 4*s.* 6*d.* was made. The jury returned a verdict censuring the sanitary authorities, and the case affords evidence of the need for continued watchfulness of bodies like the Mansion House Council over the interests of the poor.

GASTROSTOMY IN THE PROVINCES, AND THE FEE FOR IT.

A SUCCESSFUL case of gastrostomy is reported, in connexion with a County Court action for the recovery of fees for the operation, in the *Hereford Journal* of Sept. 1st. The surgeon, Mr. Thomas Edward Williams, of Talgarth, had to sue the patient for £36 15*s.*, a balance over and above fifteen guineas paid by the defendant. The operation was done for malignant disease of the œsophagus in December last, and at the time of the trial the patient was alive and well, being fed through the opening made by Mr. Williams. The operation was performed, as usual, in two parts. The first was done on Dec. 13th, the second on Dec. 18th. The patient lived twenty miles away, and there were several intermediate visits. On two occasions at least Mr. Williams remained for the night. After the first operation there was distressing thirst, which was assuaged by rectal injections of warm water. The plaintiff charged five guineas for his journeys—three for himself, and two for his assistant. When he stayed the night, he charged seven guineas. For the prolonged absence from home on the day of operation seven guineas were charged, and ten for the actual operation. The whole charges were, in fact, extremely reasonable, and all the medical witnesses but one thought so. The jury found for the plaintiff for £28 3*s.*, and the judge allowed costs on the higher scale, adding that he thought the verdict a most proper one. It is not often that a man has life saved for him so directly and palpably as in such cases as this. The reluctance to pay was remarkable on any supposition but that of poverty, which was excluded. We regret that one medical man should have given any support to the defendant in his opposition to paying fees really inadequate to the service rendered. The defendant's lawyer is privileged to denounce the plaintiff and all his ways, and much importance does not attach to his censure. But when a member of the profession does well and makes a reasonable demand for his service, he should be supported heartily by all his professional neighbours.

NATIONAL PENSION FUND FOR NURSES.

THE process by which the prospectus of the National Pension Fund for Nurses is getting pieced together is a highly curious one. A scheme is formulated and made public. In due course it is criticised and found to be conspicuously defective. Thereupon, with much angry expostulation, its constructors announce that they have the remedy in reserve, and that if the critics only understood the scheme they would be perfectly satisfied. The latest instance of this method has grown out of the notice of the newly issued prospectus, which appeared in our impression of the 25th ult. We there commented on the disparity between the premium chargeable to a pension policy-holder of the age of forty-eight years and a fortnight and to another of the age of forty-eight years and fifty weeks, and showed that it amounted, for what is practically the same benefit, to the difference between £270 and £500. This has elicited the answer that "when a nurse is asked to pay a premium of £20 a month it is understoood she will pay a definite number of premiums and no more." This is a very important proviso, and it would be curious to learn why it should have been left to be *understood* instead of being distinctly stated at the first. But now that it is made public we must ask some further questions about it. In the first place the nurses will want to know how far this principle applies. If a nurse when asked to pay £20 a month is understood to be about to pay a definite number of premiums, we presume that a like understanding will hold when she is asked to pay £10. Will it hold when she is asked to pay £1 a month, or when she is asked to pay 3*s.* 3*d.*? In a word, we shall be glad to learn whether the premiums quoted in Table A of the prospectus are payable from the date of the policy until the date when the benefit commences, or are payable only in every case for the definite number of undivided years which would be obtained deducting the age at entry from the age of commencing benefit. Or, if some of the premiums are chargeable on the one method and some on the other, we want to know where the line is drawn. A similar point, about which we invite the managers to give some further information, arises under Tables E and F, which provide combined sick pay and pension. Is a nurse who is asked to pay a monthly premium of, say, £16 5*s.* 8*d.* to understand that she will not be called upon to pay more than twelve premiums? If so, will she be secure of sick pay during the whole time that she is a member not entitled to pension, whether that time be barely twelve months or fully twenty-three? The premium above quoted apparently contains a contribution of 3*s.* 5*d.* towards the sick pay fund. Is she to pay only

twelve such contributions whether she benefits by the sick fund for the longer or the shorter period, or is her contribution to be proportioned in the ordinary way to her possible claim to benefit? And, finally, whatever the solution given of these particular problems, we shall be glad to know whether the same answers will apply *mutatis mutandis* throughout the table.

THE REASSEMBLING OF SCHOOLS AND INFECTIOUS DISEASES.

THE time for the reassembling of our schools induces us to say a word of great importance to both masters and pupils. The introduction of infectious disease into a family is distressing and disturbing enough. But this is little compared with the hardship of its introduction into schools. Yet this is often done with most singular carelessness. A few days after a school reassembles, a boy shows malaise and develops infectious disease, with which he may infect twenty other boys, possibly some of them with fatal results. Short of this, the derangement of the school and of the work and plans of the individual boys is enormous. This is a case in which the argument for notification is very cogent, and in which carelessness is something like a crime. Every parent who is guilty of such carelessness ought to be made to realise the gravity of his fault. A few successful prosecutions for the exposure of children with infectious diseases would do good. There are some parents who are not amenable to any other kind of argument. But, in general, the evil "is wrought by want of thought." It is not the less cruel in its operation. A word in time may induce all parents to reflect on their responsibility in this matter. If their children have had any doubtful illnesses, let them be kept at home till all fear of conveying disease is clearly over. The profession is often pressed in this matter. It should not suffer itself to be so. When there is any doubt in any given case, the benefit of the doubt should be given, not to the single child, but to the school to which it is proposed to send it. We give this advice with a grave sense of the evil to be averted.

METROPOLITAN ASYLUMS BOARD.

IN his annual report to the Metropolitan Asylums Board, the Chairman, Sir Edwin Galsworthy, gave the history of the board's proceedings during the twelve months ending with the first quarter of the present year, and dwelt upon the demands made during this period upon the managers for hospital accommodation for persons suffering from scarlet fever. Future experience, he said, could alone determine whether fever in the metropolis during last autumn was more than usually prevalent, or whether Londoners were learning to make a larger use than heretofore of the hospitals provided by the board, the latter, perhaps, depending upon the increased facilities given for the removal of cases of infectious disease by the Local Government Board's amended order, by which the certificate of any duly qualified man is recognised as sufficient warranty for admission. Sir Edwin Galsworthy estimates that the managers received as many as one-third of the total cases of fever occurring in London, and at one period had 2789 cases under treatment, this number approaching very closely to the 3000 beds which the Royal Commission held to be necessary for the wants of London. It must be recollected that the Commissioners in determining this number had in their mind the existence of a system of compulsory notification of infectious disease, by which it was expected that the opportunity for the extension of epidemic disease would be limited. In the absence of this system the managers may be called upon to extend the accommodation beyond the limits fixed by the Commission, for there is no longer any thought of restricting the use of the managers' hospitals to the very poor, and it may be anticipated that a still larger proportion of those attacked will seek admission. London, therefore, must choose between the expense of further hospital provision or the system of notification.

FEES FOR DISINFECTION IN MARYLEBONE.

MR. WYNTER BLYTH raises an important question in his report on the health of Marylebone for the month of July—namely, that of the expediency of making a charge for the disinfection of infected articles and rooms. He rightly explains that it is generally recognised as a principle by leading sanitarians that the expenses which become necessary for protecting the public against infectious disease should be a common charge on the community, and that, whether the question involved is that of the isolation of the sick or the disinfection of infected things, the charge should in no instance be imposed on the persons who are the sufferers. The vestry, unfortunately, only met their medical officer of health half way, by passing a resolution "that no charge be made in future for disinfecting rooms, bedding, &c., where the disinfection is ordered by the sanitary department, but that the present fees be continued in all cases where application is made for disinfection to be carried out." Anything more illogical could hardly be conceived. Those who have sufficient intelligence to appreciate the value of preventive measures, and who have sufficient interest in the welfare of their neighbours to be desirous of getting rid of a common danger, are practically to pay a fine to a body appointed to protect the public health; whilst the ignorant, and those who are careless enough to leave infection uncontrolled until the sanitary authority are compelled to interfere, are relieved of all cost, the expense in their case being borne, amongst others, by those who have already been made to pay for their desire to protect the community at large.

POST-EPILEPTIC EXHAUSTION.

HEMIPLEGIA, paralysis and diminution of sensation, and perversion of the function of perspiration, have long been known to occur after epileptic discharges. M. Féré has injected into the subcutaneous tissues of epileptic patients seven milligrammes of pilocarpine into the mid-line of the body immediately after a fit, or sometimes in the interval between the fits. Straus had previously employed pilocarpine as a means of detecting nervous degeneration. Féré found that the epileptic patients scarcely sweated at all when the pilocarpine had been injected immediately after a fit, thus pointing to the inference that the nervous centres controlling perspiration had been temporarily exhausted by the epileptic discharge. In hysterical hemianæsthesia, pilocarpine also fails to cause sweating in the anæsthetic areas.

THE WHITECHAPEL MURDERS.

THE theory that the succession of murders which have lately been committed in Whitechapel are the work of a lunatic appears to us to be by no means at present well established. We can quite understand the necessity for any murderer endeavouring to obliterate by the death of his victim his future identification as a burglar. Moreover, as far as we are aware, homicidal mania is generally characterised by the one single and fatal act, although we grant this may have been led up to by a deep-rooted series of delusions. It is most unusual for a lunatic to plan any complicated crime of this kind. Neither, as a rule, does a lunatic take precautions to escape from the consequences of his act; which data are most conspicuous in these now too celebrated cases. The truth is, that under the circumstances nobody can do more than hazard a guess as to the probable

condition of mind of the perpetrator of these terrible tragedies. Until more evidence is forthcoming, it appears to us to be useless to speculate upon what can only at present be regarded as problematical.

A MEDICAL BADGE.

AN evening contemporary gives an account of an American physician as he starts from his office with an olive-coloured button in his coat, which he uses to designate that he is a physician. It would be more effective to put a big label on his hat or his arm, calling himself the medicine man. We hope this gentleman will remain singular in this respect. We are told, indeed, that this question of a distinctive badge is to come up before the medical societies in the coming session. We venture to think that the societies will find more worthy and urgent subjects for discussion. Doctors are not often far off when they are wanted, but it is too bad to expect them to carry a sign-board on their hat or coat. The suggestion savours much too strongly of advertisement.

PYOGENIC BACTERIA.

MM. ALBARRAN and A. HALLÉ have studied a pyogenic infective organism commonly occurring in purulent urine, and believed to be capable of producing suppurative inflammation in the urinary organs and tracts. Acting upon the renal tissue, it sets up the diverse lesions of suppurative infectious nephritis, either gaining an entrance from the pelvis of the kidney or being carried to the cortex in the blood of the renal vessels. After entering the blood it may induce subacute, acute, or chronic infective lesions, which often prove fatal. These conclusions prove the necessity of maintaining absolute asepsis in all operations practised on the urinary passages, including of course catheterism, and the advisability of a previous bacteriological examination of the urine in all operations in which bleeding must occur. This preliminary examination often shows the presence of bacteria, and affords an indication for a preparatory antiseptic treatment. The biology of this bacterium has also been studied.

THE BOWMAN TESTIMONIAL.

AT a meeting recently held at Dr. George Johnson's house, it was proposed to make Sir William Bowman some acknowledgment of the appreciation in which he is held on account of his high character and professional and scientific attainments. It has been decided that a portrait of Sir William be painted, and possibly some of his publications reprinted. An influential committee has been appointed, and it is hoped that the funds will allow the distribution of a good reproduction of the portrait, which is to be painted by Mr. Ouless, R.A., to subscribers of at least two guineas. The treasurer of the fund is Dr. George Johnson, 11, Savile-row, W., to whom subscriptions may be sent.

HOUSE DRAINAGE.

IN a recent number of an evening contemporary attention is called to the summonsing of a builder at Birmingham for an infringement of a borough bye-law, by which builders are prohibited from covering up drains before inspection, and the question is pertinently asked, why should the metropolitan builder be allowed to do what is forbidden to his brother in the midlands? The answer is to be found in the report of the Commissioners appointed by the Home Secretary to consider the sanitary requirements of Bethnal-green. Under the Metropolis Local Management Act, the Metropolitan Board of Works have been empowered to make bye-laws regulating house drainage in London, but these powers have not been exercised, and builders have been allowed to construct drains in any manner they thought fit. One of the most important branches of sanitary administration entrusted to the Metropolitan Board of Works has been completely neglected, and this to the great detriment of the metropolis, and to the expense of those householders who have been wise enough to have their drainage reconstructed. Bye-laws might be framed so as to be very comprehensive. Other towns have long enjoyed advantages which London has neglected to obtain. We trust the County Council of London will early devote its attention to this subject. Only the other day at Boston, in Lincolnshire, a builder was fined for permitting houses to be occupied the drainage of which had not been approved by the local authority, but in London there is no such protection for intending householders.

POLITICAL AGITATION IN IRELAND AND THE MEDICAL PROFESSION.

IT is said in some parts of Ireland that the political agitation, and the doctrines underlying it, are having a very injurious effect on medical practice. People are apt to think that they should receive medical relief as a State right. This has long been provided for in the dispensary system of Ireland as regards the people that by any pretence can be regarded as poor. But it is now complained that people who heretofore have had a feeling of pride and independence, and who would go to the medical man of a district as private patients and gratefully compensate him for his services, now apply for the red ticket and accept gratuitous medical attendance. We cannot say to what extent this prevails, but we cannot doubt the accuracy of our information as regards some parts. We devoutly hope that it does not apply extensively. Ireland has a reputation to lose in this matter. She has the credit, rightly or wrongly, of paying medical men generously; and she has had splendid men to pay. We will not believe that any political doctrines can easily spoil such a reputation. But it is no use to conceal that it is in some danger.

DOUBLE ATHETOSIS.

ALTHOUGH hemiathetosis has received much consideration, neither its pathology nor that of bilaterial athetosis is properly understood. In bilaterial athetosis M. Brousse has observed transient contractions causing the foot to change its posture, being alternately like talipes varus and talipes equinus. Oulmont has recorded similar intermittent spasms in hemiathetosis. Articulation is also interfered with, and muscular atrophy may occur, though in double athetosis neither hypertrophy nor atrophy is the rule. A quasi-rhythmic spasm was also noticed in the shoulders in his case by M. Brousse. Tetany is sometimes followed by muscular atrophy. Cerebral wasting is the cause of most cases of bilateral athetosis, and probably this is accompanied by irritation of the pyramidal tracts. In some cases of chronic Bright's disease the atrophy of the brain occurs in patches corresponding to arterial disease.

THE RATING OF HOSPITALS.

IT is high time that the rating of charities was put upon a just basis. It is obviously absurd that St. Thomas's Hospital should pay £2000 in rates and the London Hospital only £56. In other countries the State supports the hospitals; in this it not only leaves the hospitals to be supported anyhow, but taxes those benevolent persons who save the State's money, and do what some consider the State's duty. It is gratifying to know that an attempt is to be made to get Parliament to settle this subject on a definite basis.

NEW INVENTIONS FOR USE IN DENTAL SURGERY.

THE modern practice of dental surgery, requiring as it does so extensive a use of the dental engine, and that often in a cramped position, is much more laborious than formerly, when the forceps had almost unlimited sway, and any labour-saving appliances are welcomed. Mr. Coxeter has invented an electric dental engine. The whole apparatus weighs but a few ounces, and is held in the hand when in use, like the electric mallet, which it resembles in shape. The electric current is generated by a large primary battery, or the engine can be worked by means of accumulators or a dynamo. It is spoken highly of by some dentists who have used it, but seems to be rather deficient in power for heavy work. Another invention for a similar purpose is Hastie's water motor, which was introduced by Mr. Walter Campbell of Dundee, and, as its name implies, is worked by hydraulic pressure. As it is now fitted it is almost perfect as a dental motor, but it requires a considerable force of water, and is hardly practicable unless supplied direct from the main.

INCREASED CONSUMPTION OF SPIRITS AND BEER.

THE Report of the Commissioners of Inland Revenue issued a few days ago shows that for the year ending March 31st, for the first time since 1883–84, there has been an increase in the quantity of spirits charged with duty. The amount of increase was 436,114 gallons. The gross receipts from beer duty for the past year amounted to £8,874,510, and the repayment on beer exported to £162,977, leaving the net receipts at £8,711,533. This is the greatest amount which the beer duty has ever reached, and is attributed partly to the Jubilee rejoicings. If so, we must be thankful that jubilees are not of frequent occurrence; for such quantities of beer are not taken with impunity, and without much impairment of health and life.

FALSE CHOLERA RUMOUR IN FRANCE.

IT was rumoured last week that cholera had broken out at Fort Rosny-sous-Bois; but it now transpires that the disease was enteric fever, which having broken out amongst the troops, it became necessary to transfer the battalion quartered there to Satory. The epidemic has since that step materially declined.

FROM the report on the condition of the metropolitan water supply during the month of July by the water examiner appointed under the Metropolis Water Act, 1871, it appears that the Thames water sent out by the Chelsea, West Middlesex, Southwark, Grand Junction, and Lambeth Companies contained in every case a markedly increased proportion of organic matter as compared with the previous month's samples. This increase is of course due to the heavy rainfall and swollen state of the river, although the samples were collected prior to the severest floods, which occurred at the latter end of the month. The water principally derived from the river Lea, and supplied by the New River and East London Companies, exhibited no material alteration as regards organic matter, the proportion present in the New River Company's supply being but little in excess of that in the deep well waters, whilst that in the East London Company's water was less than in any of the Thames supplies. All the samples were clear and bright.

AT a meeting of the Council of the University College, Dundee, on Wednesday last, Mr. Andrew Melville Paterson, lecturer at Owens College, Manchester, and also at the Victoria University, was elected to the chair of Anatomy, recently founded by Mr. Cox, a merchant in Dundee. The salary is £350 per annum, and two-thirds of the fees.

AMERICANS have taken a step in advance of England in the matter of checking the sale of indecent books and pictures. By a recent amendment of the United States Act relating to special crimes, any person who makes use of the Post Office to transmit indecent books, pamphlets, letters, or post-cards is liable to a fine of £1000 and five years' imprisonment. The example of the Transatlantic senators might with advantage be followed by our law-makers.

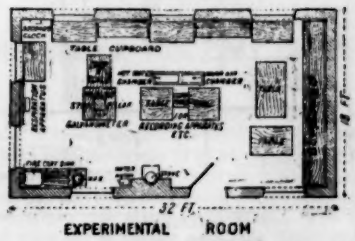
ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.

THE NEW RESEARCH LABORATORY.

THE question of equipping a research laboratory has for the past three years occupied a very prominent position in the discussions of the Royal College of Physicians, Edinburgh, but it was only last year that the committee appointed by the College was able to throw the plans into a feasible and at the same time thoroughly acceptable shape. When the matter had been taken in hand the committee entered into the scheme with great energy and thoroughness, and within a very short time suitable premises were acquired, the necessary structural alterations were at once commenced, a superintendent was appointed, and apparatus was ordered and fittings were put in hand to be ready for use as soon as the building should be prepared for their reception. The premises are well adapted for the purpose for which they were acquired. They consist of a three-storeyed house, No. 7, Lauriston-lane, near the Royal Infirmary, to which had been added a large detached room in the back court. There are also commodious outhouses and a plot of ground of considerable size at the rear of the building.

Commencing on the ground floor, we first come to the room in the back court set apart for experimental physiology, 32 ft. in length, 18 ft. in breadth, and 14 ft. high; it is well lighted by seven windows, three of which, facing to the west, are fitted with tables for microscopic work. (Fig. 1.)

FIG. 1.

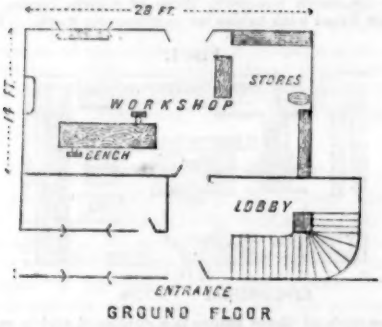


Between each of these tables is a cupboard and a range of shelves for the reception of material. On the south wall is fixed the Cambridge Scientific Instrument Company's respiration apparatus, driven by water power. On the east side at the south corner are drainer and wash-basin. Near to this is a small Thirlemere water motor used for driving light (one inch) spindle shafting, which is fixed to the wall by six brackets placed above the windows and doorway. From this recording apparatus may be driven at any part of the room at 360 different speeds. The northern end of the room is occupied by a large cabinet, in which are stored the various pieces of apparatus. Near the south end is a stone pillar bedded in the ground, so arranged as not to be affected by movements in the room. There being no thoroughfare in the lane, no disturbance can arise from wheel traffic. Around it is fixed a table to which the galvanometer wires are attached. The galvanometer is placed on the stone pillar in a glass case with a hinged door, and is always kept ready for use, short wires being carried from the table to the instrument. A hinged lamp table and brass rods, over which curtains are hung, complete the galvanometer fittings. Work tables occupy the remainder of the centre of the room. Electrical, time marking, and other apparatus, tuning forks, perfusion

apparatus, shunts, compensators, &c., constitute the greater part of the instruments in this room. Marriott's arrangement for obtaining regular pressure for injecting and other purposes is hung from the roof at two points.

At each window table on the west side is a bell jar used for protecting the microscope from dust. This is counterbalanced by a weight which runs on a brass guiding rod, so that there is no danger of breakage to the window through swinging of the weight. When not in use, the bell jar is drawn up out of the way towards the ceiling. Such an arrangement economises room and prevents breakages. On each microscope table, which is painted and hard varnished, a white band about four inches broad is painted four inches from the edge of the table. Some of the tables, instead of being varnished, are covered with plate glass, painted as above on the under surface, and embedded in felt. On these glass-covered tables the microscope stands on a felt circle, to diminish the risk of breakage, and the bell jar is lowered over the microscope. The sink and drainage apparatus in this room may be taken as a type of those throughout the whole house. It consists of a large earthenware sink, on one side of which is a grooved draining board covered with lead, the grooves all leading to the sink. A swan-neck tap supplies the water; to this tap are two nozzles, to one of which is wired a piece of indiarubber tubing, used to connect the Geissler exhaust pump &c.; the other nozzle gives a steady unbroken jet of water ⅜ in. in diameter. The wall behind the sink is leaded for about 3 ft. up; at the upper part of this are a couple of shelves, the upper one perforated for draining flasks and bottles, the lower one grooved, and with a gentle sloop to carry all moisture to the sink. Below these shelves are a couple of rows of wooden pegs fixed into the wall at an angle of 45°. These are very useful for draining all kinds of glass apparatus. In the main building in the lower flat is a large entrance lobby, to the left of which is a part of the laboratory assistant's quarters. At the back, with an outlook into the court and on to the experimental department, is a large room, which has been fitted up with a bench and tools for carpentering, metal and wire

FIG. 2.

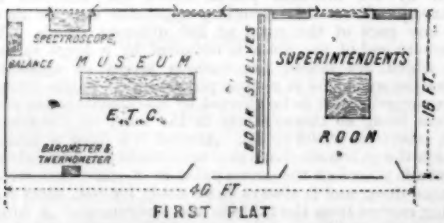


GROUND FLOOR

working, &c. (Fig. 2.) In this room is also a large Bruce microtome, with which sections of whole organs are made.

On the second flat, three of the five rooms are fitted up for the laboratory assistant. Of the others, a large room is set

FIG. 3.

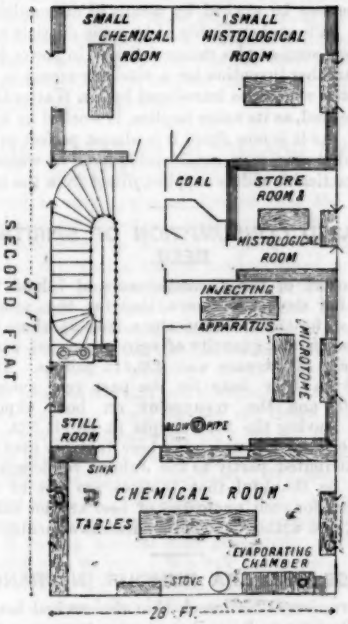


FIRST FLAT

apart for committee meetings, and is used as a library and museum. (Fig. 3.) It is also fitted with Oertling's short beam balance, supported on a solid iron bracket let into the wall. A certificated barometer graduated in inches and millimetres, and a thermometer with centigrade and Fahrenheit scales is placed here for temperature and pressure corrections. There is also a large spectroscope made by the Cambridge Scientific Instrument Company with Steinheil's prisms. It is protected when not in use by a glass case, which is counterbalanced in the same way as are the bell jars at the microscope windows.

The fifth room on this flat is the superintendent's private room, where the administrative work of the laboratory is carried on. On the next landing are six rooms. (Fig. 4.)

FIG. 4.



The first of these, a small one used as a stillroom, where the still is connected with the water pipe and is self-feeding, so that, to obtain a supply of distilled water, all that is necessary is to turn on the tap and light the Bunsen burner.

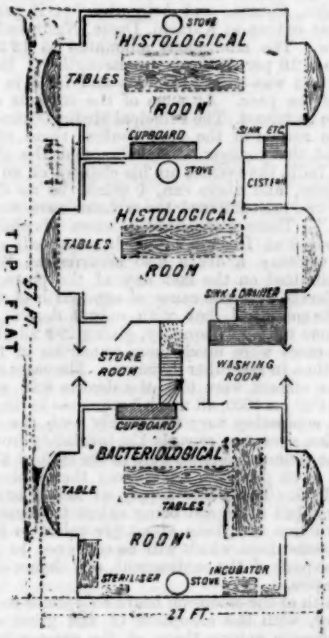
A second room, the chemical room, is fitted with a good supply of water and gas. There are eight taps in the room, seven of which are swan necked, with a double nozzle. Two ends of the room and the evaporating chamber are fitted with ten-inch basins, and in the corner is a sink with drainer, pegs, &c., similar to those already described. The room is lighted by half a dozen gas brackets, and for the gas supply for Bunsens, &c., there are eighteen connexions. On three sides of the room are three shelves at intervals of 9in. and 15in. On the fourth side of the room is a large evaporating chamber, divided into two by a hinged window.

The two compartments are ventilated separately into a metal chamber opening into the flue. In this metal chamber a Bunsen may be kept burning, to keep a current from the evaporating chamber into the flue. At one end, and opening into the chamber, resting on the stone slab continued outside the chamber, is one of Fletcher's sand-baths. This room is stocked with most of the apparatus necessary for carrying on physiological chemical work, the analysis of air, water, food, and the rest. The next room is set apart for blowpipe work, metal injections (Cathcart's method), embedding in paraffin and celloidin, and section-cutting. It is also used as a store-room for some of the glass apparatus, and the window is fitted with a table for histological work. Next door, on this same flat, is a small room used as a store-room for reagents and other chemicals. The window is fitted with a table for microscopic work. Then comes another small histological room, set apart for the estimation of urea, albumen, sugar, &c., in urines in con-

nexion with clinical work undertaken by the Fellows of the College.

On the top storey are three splendidly-lighted rooms, all of which are devoted to microscopic work. (Fig. 5.) In the south room the apparatus necessary for bacteriological research is collected. Two large projecting roof or dormer windows face east and west respectively. Each is fitted with a table covered with a sheet of plate glass, on the under surface of which are painted three strips, the first 4 in. broad, black; then a similar white band, and then a broad black band extending to the back of the table. On each side are shelves from the floor for about 5 ft. up. These are within reach of anyone sitting at the table. On each side is a drawer 3½ in. deep; but the remainder of the space under the table is left quite open in order that earthenware jars for the reception of chemicals, washings, and débris may be accommodated. On the left side is fitted a rack for test tubes, and in front and to the right are stands for ordinary histological reagents. Above the level of the table in front are four small shelves, on which are placed covered vessels for clean and dirty slides and cover glasses. A syphon arrangement for distilled water, a bell jar with counterpoise

FIG. 5.



running on a brass rod, a Bunsen burner, and a lamp complete the fittings at this table. One of Browning's microspectroscopes has also been fitted up in this room. Racks for series of Hesse's tubes and shelving complete the fittings here; but opening out from it is a small room with a sink and large sloping drainer, at which most of the glass apparatus is washed.

The other two rooms in this flat are fitted up for histological work, with window tables, sinks, cupboards, spirit vessels, shelving, &c., each for two workers. In connexion with the histological department, apparatus for microphotography has been fitted up by Messrs. Forgan.

The arrangements for conducting the work are somewhat as follows. The College has established and will maintain the laboratory for the prosecution of original research. To facilitate such work the Council of the College "appoint a scientific superintendent, who must devote such portion of his time as may be determined by the Council to the work of the laboratory, where, under the supervision of the curator and committee, he shall himself undertake the prosecution of original research, and be prepared to assist, if required to do so, in the work of other investigators. Under like supervision he shall also be prepared to furnish the Fellows of the College with reports upon such matters as the histology of morbid specimens, and of the chemical and microscopic characters of urines," in which work he is assisted by the resident attendant.

The laboratory is open without fee to Fellows and Members of the College, to any Licentiate who shall obtain the sanction of the curator and committee to use the laboratory for the purpose of scientific research, and "to any medical man or investigator who shall obtain the sanction of the Council of the College as well as of the curator and committee to use the laboratory for the purpose of scientific research."

The institution is open for research work daily, Sundays excepted, from 10 A.M. till 5 P.M., except on Saturdays, when it is closed at 1 P.M. A special arrangement may be made by those desirous of working after the usual hours of closing, but for this the written permission of the superintendent must be obtained.

Investigators are entitled to the assistance of the laboratory officers or servants in the preparation of apparatus; but the actual work of carrying on experiments, cutting and mounting specimens, &c., must be done by the investigator himself.

The whole of the expense of establishment and maintenance has been and will be defrayed from funds placed at the disposal of the committee by the Council of the College. Of this, an initial grant of £1000 was made with which to adapt and furnish the house, and buy apparatus, instruments, and chemicals. In addition to this, an annual grant of £650 is made, from which all salaries, rents, and taxes are paid, and stock is kept up. Of these sums, only about £830 of the original £1000 and £600 of the annual grant was spent during the first twelve months, so that the whole equipment and fittings of the laboratory, together with the current expenses during the above period, cost only £1430.

During the year there have been twenty-three medical men, nine Fellows and four Members of the College, and nine other qualified men engaged in pathological, physiological, chemical, or bacteriological investigations, some of which have been completed and will shortly be published. In addition, nearly 100 tumours or other histological preparations have been examined, and numerous analyses made by or for the Fellows of the College and others. The laboratory has also been used for examination purposes in connexion with the diplomas in Public Health granted by the College.

HEALTH OF THE ARMY IN 1886.

No. III.

THE average strength of the European troops in India, exclusive of Upper Burmah, was 61,757; the admissions into hospital were 1484, the deaths 15·51, the invalided to England 21·05, and the constantly sick 73·90 per 1000—all under the average of the preceding ten years, except the mean sick, which was 10 per 1000 above the average. The increase, compared with the preceding year, was chiefly in Madras, but also, though to a less extent, in Bombay; in Bengal there was a slight decrease.

In Bengal the admissions were 1516, the deaths 15·80, the invalids 18·30, and the mean sick 71·96 per 1000 of strength—all, except the mean sick, under the average. Omitting the stations at which the average strength was under 100, Kasauli has the highest ratio of admissions, amounting to 2830 per 1000, and Solon the lowest, 761. It was also very high at Allahabad, Delhi, and Barrackpore. The highest death-rates were 50·85 at Fort Lahore, 43·22 at Jhansi, and 42·99 at Jullundur; while at Landour, Jutogh, Solon, Fort Attock, and Kuldunnah no death occurred during the year. Malarial fevers were the most prevalent disease, and enteric fever the most fatal. Of the latter, the admissions were 20·7 and the deaths 5·61 per 1000, or upwards of one-third of the total mortality. The disease appears to have been very widespread, the only stations which did not return any case being Darjeeling, Muttra, and Landour. Those at which it was most prevalent and fatal were Lucknow, Sialkot, Rawal Pindi, Ranikhet, Dagshai, Umballa, and Peshawar. The deaths were 221 in 820 cases, or upwards of one in four; the greatest number of cases occurred in the second and of deaths in the third quarter. At none of the stations could the origin of the

disease be traced to local conditions, "and the conclusion arrived at was that it was due to climatic effect on young and recently arrived soldiers." There were only 36 cases with 25 deaths of cholera, being in the ratio of 0·9 and 0·63 per 1000 of strength. The only stations at which it could be said to prevail as an epidemic were Dinapore, Shahjehanpur, and Jhansi; at the two former in the last quarter and at Jhansi in the third quarter of the year. One-third of all the cases occurred at Dinapore, most of them "coming from the temporary barracks, which are close to the river, badly planned and built, and subject to malarious influences." Malarial fevers caused the very high rates of 1282 admissions per 1000 of the strength in the Quetta district, and of 666 per 1000 in the Meerut division; and at Quetta the death-rate from this cause was 3·78. The Lahore, Saugor, Gwalior, and Allahabad divisions also furnished a high proportion of cases. Venereal diseases continue to be an important cause of inefficiency, the admissions having amounted to 308 per 1000, and the proportion constantly sick under that head to 21·80. The abuse of alcohol gave rise to 16·3 admissions and 0·20 deaths per 1000. Allahabad and Saugor furnished the highest ratios of admissions, and Peshawar and Gwalior the lowest. Among the deaths from injuries were two from lightning; they "occurred in the swimming-bath at Sialkot, where the men were bathing. The building was struck, and they were killed instantaneously; five other men were in the water at the time, two of whom were affected, but ultimately recovered."

Among the officers in Bengal the cases were 689, the deaths 26·13, and the invaliding 33·97 per 1000, the first being much under, but the mortality and invaliding greatly in excess of, the proportion among the men. Enteric fever was slightly more prevalent and fatal than among the men. Six of the 30 deaths were from accidental causes. In an average of 1920 women the cases were 716, and the deaths 17·71 per 1000, the latter being 2·20 per 1000 higher than among the men. One-fourth of the deaths were from enteric fever. Among the children there were 497 cases and 47·25 deaths per 1000.

In the Madras command, exclusive of Upper Burmah, in an average force of 11,199 the admissions were 1366, the deaths 16·60, the invalids sent home 23·84, and the mean sick 80·68 per 1000—all except the invaliding considerably above the average. In Lower Burmah the admissions were 1887, the deaths 34·30, and the mean sick 106·98 per 1000, but these results were "greatly influenced by sickness and mortality of troops going to, and particularly returning from, field service." Omitting the stations in Burmah and those at which the strength was under 100, the highest ratio of admissions was 2387, at St. Thomas's Mount; and the lowest 939, at Belgaum. The highest death-rate was 33·03, at Madras and Pallaveram; at Mallaporam no death occurred during the year. The high ratio at St. Thomas's Mount is stated to have been "partly due to the effects of field service and partly to the amount of sickness which occurred in one battery just arrived from England, and consisting chiefly of young soldiers." Venereal diseases were the most prevalent, and enteric fever the cause of the greatest number of deaths; the latter amounted to very nearly one-fourth of the total mortality. It prevailed to a great extent at Secunderabad, Bangalore, and Wellington. There were only 5 cases in Burmah, 3 at Rangoon, and 2 at Thayetmyo; but they were all fatal. At Secunderabad, in a force of 2695, there were 76 cases and 25 deaths; at Bangalore, in 1597, there were 30 cases and 8 deaths; and at Wellington, in an average of 413, there were 11 cases and 2 deaths. The disease was most prevalent and fatal in the third quarter, and the proportion of deaths to cases was 1 in 3. At none of the stations could any definite cause for the prevalence of enteric fever be assigned; at Bangalore it was supposed that "the men do not contract the disease in barracks, but outside, either in the bazaars or villages, where they are exposed to insanitary conditions, and drink filthy water and common bazaar beverages." There were only 2 cases of cholera, with 1 death, during the year; both occurred in Burmah. Malarial fevers were the cause of 140 admissions per 1000; but if Burmah be omitted, where their prevalence was greatly increased by the cases contracted on field service, the ratio was only 84 per 1000. Venereal diseases gave rise to 283 admissions and 21·42 constantly non-effective per 1000 of strength, results slightly under those of Bengal. In Burmah the admissions and deaths were very high at Thayetmyo, amounting to 2910 and 54·86 per 1000, "resulting from the exposure and harassing duties devolving upon the various columns operating in the neighbourhood." At Rangoon they were also high, being 1792 and 39·74 per 1000, the latter, apparently, consequent upon the establishment of a general hospital in connexion with the Burmah Field Force. At Port Blair, in the Andaman Islands, the admissions were only 940 and the deaths 7·52 per 1000; and at Toungoo, the only other station in Lower Burmah, they were 1348 and 14·28 respectively.

In an average strength of 274 officers, the cases were in the ratio of 958, the deaths of 10·49, and the invaliding of 101·4 per 1000, all higher than in the preceding year. Among the women, 887 in number, the cases were 895 and the deaths 12·40 per 1000. The children had 791 cases and 44·45 deaths per 1000, a much higher admission-rate, but slightly lower death-rate, than in Bengal.

The average strength in Bombay was 11,000; the admissions were 1488, the deaths 13·36, the invaliding to England 28·09, and the mean sick 73·98 per 1000—all, except the mean sick, considerably under the decennial average. The admissions ranged between 1102 at Kirkee and 2387 at Asirgarh, and the deaths between 3·87 at Ahmednagar and 30·30 at Ahmedabad. Malarial fevers were the most prevalent and enteric fever the most fatal diseases. Cases of enteric fever occurred at all the stations in the command, except Aden, Satara, and Asirgarh; but it prevailed to the greatest extent at Karachi, Deesa, Nasirabad, Poonah, and Mhow. The admissions amounted to 12·2 and the deaths to 4·18 per 1000 of the strength; 1 in 3 of the cases died; it was most prevalent and fatal in the third quarter of the year. At none of the stations could any local cause be traced. The Principal Medical Officer remarks that "the results of the year confirm those of previous years, that the younger the soldier and the shorter his service in India the greater are his chances of an attack of enteric fever, and there can, I think, be no doubt that when the two are combined these chances are considerably enhanced." There were only 4 cases of cholera, 3 of which died—2 at Deolali, 1 (which recovered) at Indore, and 1 at Quetta; a death also occurred at Karachi, of a man admitted on the last day of the preceding year. Malarial fevers were the cause of one-fourth of the admissions in the command, but with only 1 death. Venereal diseases were next in frequency, giving 293 admissions per 1000; the cases were much more numerous in the Mhow and Sind than in the other divisions. The cases of sickness among the officers were 610, the deaths 8·29, and the invaliding 44·20 per 1000, all much lower than in the preceding year, and comparing very favourably with the other two Presidencies, except as regards the invaliding from Bengal. Among the women the cases were in the ratio of 839 and the deaths of 14·66 per 1000, and among the children 557 and 48·76 per 1000. The water supply at Mhow has not been satisfactory, but steps are being taken to remedy this by the construction of a lake about five miles to the south-west, the water from which will be conveyed to a tank in the highest part of the cantonment, and thence distributed by gravitation.

The health of the troops on board ship seems to have been satisfactory, with the exception of the great amount of venereal disease among those on the passage out, which amounted to an annual ratio of 590 per 1000. Among those on the passage home the death-rate was 16·16, but of this 5·39 was by cholera on board the *Euphrates* on the second, third, and fourth days after leaving Bombay.

The number of recruits medically examined as to fitness for military service was 74,991, of whom 32,833 were rejected, being in the ratio of 438 per 1000. There were 62,658 primarily inspected by army medical officers, and 12,333 by civil medical practitioners; of the former 441 per 1000 were rejected, and of the latter only 208 per 1000; but on secondary inspection by army medical officers, 186 per 1000 were considered unfit, making a total of 394 per 1000. Among the causes of rejection, however, are several which ought rather to be considered military than medical, and which until lately it was the duty of the recruiting officer to ascertain before sending the man for medical examination. For instance, the height, the chest measurement, and the apparent age were all formerly points for which the military officer was held responsible, and deviations from the standard of which might be more fairly classed as not in accordance with the army regulations than as physical defects. There are also included in the rejections 373 men "found unfit within first three months of service,"

who certainly ought not to be included among the rejected on primary inspection. If these various groups be deducted, the proportion of rejections on medical grounds would amount only to 257 per 1000. The most frequent causes of rejection were muscular tenuity and debility, which gave rise to 54, defective vision 42, and disease of heart 19 per 1000. The proportion rejected was highest in the Household Cavalry, and lowest in the Royal Engineers; in the Royal Engineers and the Foot Guards the proportion was also lower than in the troops of the Line. England furnished 758, Ireland 139, Scotland 92, and the British Colonies and foreign countries 11 per 1000 of the recruits. Compared with the preceding year this shows a slight decrease in the number of Scotch recruits. Of the recruits examined 78 per 1000 were unable to read, and 56 able to read only, both ratios being considerably lower than in 1885. We regret to observe an increase in the proportion of recruits under nineteen years of age; of the total inspected 6576 in every 10,000 were under twenty, as against 6200 in the preceding year. As regards height, omitting boys, the highest proportion of recruits was between 5 ft. 4 in. and 5 ft. 5 in., of weight, from 120 lb. to 130 lb., and chest measurement, 33 in. to 34 in. From the tables given in this section of the report it has been calculated that, excluding boys under seventeen years of age, the average age of the recruits at inspection during the year was 19·5 years, the average height 5 ft. 5·6 in., the average weight 123·3 lb., and the average chest measurement 36·4 in.

THE BRITISH ASSOCIATION.

THE annual meeting of the members of this Association commenced at Bath on the 6th inst., the following being a brief summary of the proceedings in the Sections of Biology, Chemistry, and Anthropology.

On the opening day the Section of Biology met at the Mineral Water Hospital, when Professor W. T. Thiselton Dyer presided, and delivered the opening address.

The section of Anthropology met at the Grammar School, under the presidency of Lieutenant-General Pitt-Rivers, D.C.L., F.R.S. The presidential address having been delivered, Dr. G. B. Barron read a paper on the Constitutional Characteristics of those who dwell in Large Towns, the full text of which we hope to be able to publish in a future number.

Karl Grossmann, M.D., read a paper on Colour-blindness.

Mr. E. B. Tylor described a method of investigating the development of institutions as applied to laws of marriage and descent.

In the Zoological Department of the Section of Biology, Sir J. Lubbock, M.P., read to a crowded audience a paper on the Instincts of Solitary Wasps and Bees.

On the 7th inst. there was a joint meeting of the Chemical and Biological Sections in the Friends' Meeting House for the purpose of discussing the nature of the chemical problems presented by living bodies. The chair was occupied by Professor W. A. Tilden, president of the Chemical Section, and the discussion, which is referred to elsewhere in our columns, was joined in by Professor Michael Foster, Mr. W. T. Thiselton Dyer, Sir H. Roscoe, and Professors Armstrong, Schäfer, Gardner, and Gladstone.

On the 9th inst., at the meeting of the Chemical Science Section, Professor Dunstan read the report of the committee, consisting of Professor H. E. Armstrong, Mr. J. T. Dunn, Professor W. R. Dunstan (secretary), Dr. J. H. Gladstone, Mr. A. G. Vernon Harcourt, Mr. Francis Jones, Professor H. M'Leod, Professor Meldola, Mr. Pattison Muir, Dr. W. J. Russell, Mr. W. A. Shenstone, Professor Smithells, and Mr. Stallard, appointed for the purpose of inquiring into and reporting on he present methods of teaching Chemistry. The committee asked for re-appointment, which was granted.

The Rev. A. Irving read a paper entitled "Chemistry as a School Subject." A long discussion followed the reading of this paper, after which the Section adjourned.

At the meeting of the Physiological Department on Friday, Professor Roy, M.D., F.R.S., Professor of Pathology in the University of Cambridge, and Mr. J. G. Adami, M.A., M.R.C.S., University Demonstrator in Pathology at Cambridge, contributed a paper on the Physiological Bearing of Waist-belts and Stays. It stated that in the course of an investigation upon the work of the heart in health and in disease certain facts were observed by the authors which throw not a little light upon the physiological bearing of waist-belts &c. By means of an instrument devised by them—a cardiometer—they have been enabled to register very accurately the changes of volume in, and the amount of blood propelled by, the heart under varying conditions. Experimenting upon the dog, they found that even slight compression of the abdomen caused an increase in volume of the heart, and with this a greatly increased amount of blood passed through the heart in a given time, the increase being often 30 and 40 per cent. and more. These phenomena can be explained without difficulty. The abdominal vessels are capable of containing all and more than all the blood in the organism. Slight compression of the abdomen will, without disturbing the arterial supply, drive out from the abdominal veins and venous capillaries a large amount of blood; and this blood so driven out will, as long as the compression continues, be of use for the other regions of the body—for the brain, muscles, &c. Now the functional activity of any organ depends directly upon its blood supply. Increase the arterial blood supply of any part, and, other things being equal, the activity and power of work of that part are increased. It is to be noted further that the abdominal walls in front and at the sides are formed of soft, more or less elastic, tissues. In health, pressure is, through these, exerted upon the abdominal contents, and at the same time upon the abdominal veins and venous capillaries. If, however, the abdominal muscles lose their tone, the walls become flaccid, and through the diminished pressure the veins pass into a condition of comparative dilatation, and thus hold not only a larger amount of blood than is necessary, but act, as it were, as reservoirs for this blood, and so deprive the rest of the body of an amount of fluid necessary for its due nutrition. Here, then, we have an explanation of the extensive use of some form or other of waist-belt by all nations who have passed beyond the stage of absolute barbarity. The waist-belt is of use, and has constantly been used, in cases of sudden and great exertion, and in those cases where, through want of tone of the abdominal wall, it becomes necessary to counteract the tendency to a useless storing up of blood in the abdomen; and lastly, and most frequently, by those in perfect health, by bringing more blood into the service of the brain and muscles to produce a condition of *bien-être*—of increased mental and muscular activity. With regard, now, to the second ground for the employment of waist-belts and stays. Flaccid abdominal walls are, from various circumstances, rather the rule than the exception in the gentler sex, and, among men, occur in those leading sedentary lives devoid of exercise. We are therefore brought to conclude that among women some form of waist-belt is very advantageous: be it from muscular weakness, or from a desire to obtain easily a condition of good mental and bodily activity. The modern corset is an article of apparel which may be said to be evolved from two separate belts—the waist-belt proper and the band over the lower ribs, the *στρόφιον* of the Greeks employed to preserve the figure. These in the course of time have become combined, and now are worn not only by the well-to-do, but by the poorest in every European country. Moderate constriction does no harm; extreme constriction is not only absurd, but dangerous, inasmuch as, instead of promoting exercise and activity, it does the reverse, and, while causing pressure upon the veins, affects the arteries also, and disturbs the blood supply of the abdomen and lower extremities as well. The pressure upon the abdomen should be capable of alteration according to circumstances, and should be slight after meals, when digestion is going forward and a full abdominal circulation is required. Stays should leave the lower part comparatively elastic, and pressure should be exerted by an external belt.

Dr. Collins read a paper on Chemical Constitution and Physiological Action, describing the effect of various substances (chiefly members of the aromatic series of organic compounds) upon the rate of secretion and constitution of the bile.

The second report of the committee, consisting of Professors Schäfer (secretary), Michael Foster, and Lankester, and Dr. W. D. Halliburton, appointed for the purpose of investigating the Physiology of the Lymphatic System, was presented.

In the Section of Anthropology the Marriage Customs of

the New Britain Group was the subject of a paper read by the Rev. B. Banks.

On the 10th inst., in the Section of Biology, the report of the committee to investigate the development of the oviduct and connected structures in certain freshwater Teleostei stated that perch had been selected as the most suitable subject, but the arrangements for the supply of ova and fry broke down, and it was proposed to renew the experiments under different conditions.

The Echinodermata of the Sea of Bengal was the subject of a paper by Professor F. Jeffrey Bell.

Mr. W. E. Hoyle read a report from the committee for administering a grant in aid of the Scottish marine station, in which it was shown that a laboratory at Granton and another at Millport, in the Firth of Clyde, had been maintained throughout the year, in addition to the steam yacht *Medusa*. Investigations had been carried out by various gentlemen, which were being communicated to the Association at this meeting, and it was asked that the grant should be renewed.

In the Section of Anthropology, Miss A. W. Buckland read a paper designed to trace the geographical distribution of various forms of Necklaces and Beads, as indicating some sort of commercial intercourse between the races among whom they are found either in present use or among the relics of the past. Major C. R. Conder, R.E., read a paper on the Early Races of Western Asia. Mr. J. T. Bent gave an account of some discoveries in Asia Minor. Some notes on the Hyksôs, or Shepherd Kings of Egypt, were contributed by the Rev. Henry George Tomkins. Lastly, Mr. J. S. Glennie read a paper entitled "Pelasgians, Etruscans, and Iberians; their relations to the Founders of the Chaldean and Egyptian Civilisations."

On the 11th inst., in the Section of Chemical Science, several papers of a highly technical character were read and discussed. The Action of Light on Water Colours was the subject of a paper contributed by Dr. Arthur Richardson.

There was a joint meeting of the Sections of Geology and Biology to discuss the formation of Coral Reefs. Mr. Thiselton Dyer, president of the Section of Biology, occupied the chair, and in his opening remarks alluded to the discussion on the alleged conspiracy of silence on the part of the members of a certain geological school.

In the Section of Anthropology, Mr. J. Theodore Bent contributed a paper on Sun Myths in Modern Hellas.

The Ancient Inhabitants of the Canary Islands was the subject of a paper by Mr. J. Harris Stone.

Some account of the ancient (pre-Roman) stronghold of Worlebury, near Weston-super-Mare, was given by the Rev. Henry George Tomkins.

"Celtic Earthworks in Hampshire, in reference to the Density of the Celtic Population," was the title of a paper by Mr. T. W. Shore, F.G.S., F.C.S.

On the 12th inst., the last day of the meeting, in the Section of Biology, the second report of the committee, consisting of Professors Schäfer (secretary), Michael Foster, and Lankester, and Dr. W. D. Halliburton, appointed for the purpose of investigating the physiology of the lymphatic system, was presented.

Dr. W. J. Collins read a paper on Chemical Constitution and Physiological Action.

Mr. F. E. Beddard read a paper on the Anatomy of certain Marine Annelids, in which he had succeeded in tracing out the oviduct, and thus aided in solving the question, which had hitherto been one of difficulty.

In the Section of Anthropology, Miss A. W. Buckland read a paper giving a description, illustrated by photographs and plans, of King Orry's Grave, Isle of Man.

Mr. G. W. Bloxam submitted observations made by himself and Dr. J. G. Garson, in the Anthropometric Laboratory at Manchester.

PROPOSED SEWERAGE SCHEME FOR MANCHESTER.—An official inquiry has just been opened at Manchester by Mr. S. J. Smith, C.E., on behalf of the Board of Trade, as to an application by the City Council for sanction to borrow £450,000, for the purposes of sewerage and sewage disposal, and £40,000 for the purchase of land to be utilised as a place of deposit for the refuse. The scheme, which is on a very extended scale, has been in course of preparation for four or five years, and is, with some modifications, similar to that in operation in Leeds. The inquiry was adjourned.

THE TRADES UNION CONGRESS ON THE ABOLITION OF SWEATING.

THREE or four times during the week the delegates assembled at Bradford discussed the sweating system. There were in all 165 delegates, and, if we add the number of paying members belonging to each of the societies represented, we get a total of 816,944 workmen and workwomen, for there were three delegates sent by women's trades unions. It is therefore very evident that the present Congress is more influential than its predecessors. The speakers represented the aristocracy of English labour, of whom a large proportion are electors. Consequently the opinion of such a Congress must exercise considerable effect on legislation, and no subject was treated in a more practical manner than that of "sweating." In his opening speech the President, as will be seen in another column, warmly approved our suggestion with regard to the construction of municipal workshops, and on the very first day a resolution was brought forward to the effect, "That this Congress views with considerable alarm the violations of the Factory and Workshops Act that are daily taking place in various parts of the country, and instructs the Parliamentary Committee to make a special effort to induce the Government to appoint a considerable additional number of practical persons as factory and workshop inspectors." This is a reform on which we have repeatedly insisted, adding that inspectors should have the power of employing detectives, and that their work should not be limited to any particular hours of the day. These two points were, however, not mentioned at Bradford. On the other hand, Mr. McLean of Edinburgh confirmed our assertion that the actual inspectors were sometimes out of sympathy with the workers whom it is their business to protect; and Mr. Meharg of Belfast raised the question of dressmaking in private houses, where, in the busy season, the work lasts from six in the morning to twelve at night, in spite of all the stipulations of the Factory Act. Other delegates insisted that machinery was still too often left without railings or protection, so that preventable accidents happened; while Mr. W. Austin, on behalf of the London journeymen bakers, made some revelations concerning the manufacture of household bread that were of a most unappetising description. The inspection of bakehouses was, he maintained, not properly manage'. The sanitary condition of some of the places was very bad, and yet men had to work there. They were thorough dens, which only needed proper inspection to be condemned." Mr. Abraham, M.P., remarked that in South Wales there was only one inspector having control over from 3000 to 4000 factories. With such facts as these placed before the Congress, the delegates did not hesitate to carry the resolution mentioned above unanimously.

On Friday a resolution was proposed, "That provision be made whereby the Board of Trade, or other Government departments, shall have full power to prevent any contract for articles required by Governmental departments, or by any municipality, where such articles are provided out of either imperial or local taxes, being carried out by sub-contractors or sweaters."

Mr. Morrison, of the London saddle makers, remarked that the Government had already full power to prevent sweating, as there existed a contract providing that no work must be done at the homes of the people under a penalty of £100. But the Government officials forgot to impose this clause. They ought to be reminded that it was their duty to set an example by paying fair wages. To meet these objections the resolution was altered so as to imply the enforcement of the clause in all contracts, and then carried unanimously.

Subsequently the following resolutions were moved by Mr. Neil McLean, of the Edinburgh tailors, after a lengthy debate, and carried unanimously. We reproduce them *in extenso*, as it will be seen that they have been very carefully and thoughtfully drawn up:—

AMENDMENT OF THE FACTORY AND WORKSHOP ACT, 1878.

1. *Sanitary provisions.*—"That Sub-section 3 be so amended as to provide a minimum of 350 cubic feet of space per head of the workers employed in any apartment. That Sub-section 4 be so amended as to give full power to the inspectors under this Act to order such waterclosets, earthclosets, urinals, or other sanitary conveniences as are

necessary for the use of the workers, to be provided and kept in proper order; and that, if necessary for the carrying out of this provision, he shall take with him a person skilled in the inspection of such sanitary provisions."

2. *Power of inspector.*—"That Sub-section 69, limiting the power of inspectors to enter domestic workshops, be entirely deleted."

3. *Registration.*—"That Sub-section 75 be so amended as to include workshops upon the same conditions as factories; and further, that any employer giving out work to be made, or partly made, elsewhere than on his own premises, shall keep a list of such places for the use of the inspectors; and further, no person will be allowed to carry on any handicraft in any domestic workshop or dwelling-house, unless such dwelling-house or domestic workshop has been duly licensed for the purpose."

4. *Overtime.*—"(*a*) That in all cases of advantage being taken of the overtime exceptions under the Act it shall be compulsory to enter the date and duration of such overtime upon a sheet kept for the purpose, such sheet to be affixed to the wall or door of the factory or workshop, in such a position as to be seen by the workers interested, or by the inspector when he visits the premises; (*b*) that a clause shall be inserted into the Act making it illegal for parties working in any factory or workshop to evade the restriction as to hours by taking the work out of that or any other factory or workshop to be done elsewhere, or for the owner of any factory or workshop to cause or allow the work to be taken out of his factory or workshop for the purpose of such evasion; (*c*) that it be an instruction to the Parliamentary Committee to take steps to bring this matter before the Government, with the view of getting these amendments incorporated into the Act."

In the above clauses will be recognised many of the "measures to abolish sweating" which we recommended in a leading article bearing this title. It is very satisfactory to find that our suggestions are thus approved and actively brought forward by those who have the most experience and best know all the grievances we have sought to describe and remedy. We trust the Parliamentary Committee will not neglect the matter, but will profit by its *entrée* to the lobby of the House of Commons and the undoubted influence it exercises over the members of our Legislature to push these points home.

SCHOOL HYGIENE IN SWITZERLAND.

(*From a Holiday Contributor.*)

TEN fine days in six weeks. Such is the weather report from the "play-ground of Europe." Bad as the season has been, meteorologically considered, the influx of visitors has not diminished; indeed, there are resorts, particularly in Central Switzerland, where hotel-keepers refuse to promise accommodation owing to the daily excess of arrivals over departures. Except for mere change, there has been little to attract the British tourist to the Swiss lakes and mountains this year, while the poverty of hotel and *pension* in in-door resources has been felt more keenly than I ever remember it to have been; and yet to anyone who can forego the charms of scenery and the pleasures of active or risky exercise, Switzerland has many compensating interests, foremost amongst which is her social economy, particularly her educational system, on its hygienic as well as scholastic side.

Zurich, always to the front whenever the training of the young is in question, has just been the scene of a most successful Congress, and that an international one, on School Hygiene in general, and more especially on what its promoter calls "Ferien-Colonien," or Vacation Colonies. Germany, Austria-Hungary, France, Belgium, Italy, and Switzerland herself were all represented, and at its first sitting (on the 13th inst.) the chair was taken by the Pfarrer Bion, well known as an enlightened and energetic educationist. Congratulatory telegrams were read from Dr. Ranchfuss, director of the Children's Hospital of the Prince of Oldenburg at St. Petersburg, and from the widowed Empress Frederick of Germany, whose characteristically noble message, dated from Friedrichskron, was as follows: "I salute from afar the Zurich Congress of the promoters of the Ferien-Colonien, and I gladly take occasion to express my gratitude for all the blessings they have conferred on the rearing of poor children. May everyone who contributes to this love task earn a rich reward in its success." The Congress, on the motion of the President, telegraphed in reply to the Empress: "We, the representatives of Germany, Austria-Hungary, France, Belgium, Italy, and Switzerland, at the Congress for Ferien-Colonien and for allied efforts in school hygiene, most reverently thank your Majesty for your cordial congratulation, and beg you to favour our endeavours with your interest and support even from afar." This done, amid the applause of the numerous assembly, the business of the Congress began. Dr. Oscar Wyss of Zurich reported on the organisation and success of the Ferien-Colonien—colonies or establishments where poor children, during the vacation, can receive such care or, if need be, special treatment as they may have been found to require by their experience at school. The advantages of this institution were signally exemplified, not only in the educational, but also in the physical well-being of the child. Statistical evidence of the most gratifying kind was adduced and corroborated by Dr. Unrah of Dresden and Dr. Veith of Frankfurt. Rector Reddersen of Bremen spoke warmly in favour of the system, and M. Jules Steeg of Paris dwelt on the blessing it had already proved, even in its partially developed form, in France. Dr. de Cristoforis of Milan added his testimony from the Italian side, and suggested that uniform statistics as to the working of the institution should be compiled from the common experience of all the countries that had adopted it. Such statistical publications, Pfarrer Mittendorf of Geneva thought, should emanate from the Zurich Committee, as the originating centre of the Ferien-Colonien. A most interesting discussion closed the first or forenoon sitting of the Congress, from which it appeared that in Germany alone there were, in 1876, from one town, seven children sent to a Ferien-Colonie; while in 1885, from seventy-two towns no fewer than 9999 children were so accommodated and treated. During ten years, 34,722 German children had enjoyed the benefit of the institution, and the funds at the disposal of the committees throughout the empire amounted to 225,909 marks.

At the second or afternoon sitting Dr. Kerez treated of the sanatoria and seaside hospitals for rachitic and scrofulous children, and indicated the numerous endeavours, some of them being on a considerable scale, that had been made to multiply and perfect these health resorts in various countries. He gave, in the course of his paper, a most interesting account of the subalpine Swiss Kur-ort in Aegeri, and showed how results equally gratifying might be attained in other favoured spots.

The next day's (14th inst.) sitting was signalised by an important discussion raised by Director Jung of Munich on Kinderhorte (children's retreats). The scope, the conduct, and the good effects of these institutions on the moral, intellectual, and physical development of tender youth were strikingly set forth, thanks to the warm support accorded them by the Prussian, the Bavarian, and the Würtemberg Governments. Dr. Jung concluded his cordially received paper with these words: "As far as in us lies we will continue to work in this field, and zealously and untiringly promote every undertaking which experience has shown us to be right, useful, and necessary for the safeguarding of our less-favoured youth." In a similar strain, Herr Fisler, a teacher of Zurich, followed, and showed that Kinderhorte, to fulfil their object as family homes, should restrict the number of their pupils, and in their management give preponderance, as against the purely scholastic, to the physical training, as the essential groundwork for the success of youth in future life. The next communication was that of Dr. Haab of Zurich, on Myopia and other eye affections in schools. He had examined in Zürich 2475 children before their entrance into the first class, and found in 441 an abnormal condition of the eyes, 174 being short-sighted. In very few cases is the myopic defect to be laid to the door of the school, his testimony in this respect confirming that of Dr. Stilling of Strasburg, already given in THE LANCET. At the close of the sitting, it was resolved, on the motion of Dr. Kotelmann of Hamburg and Dr. Leo Burgenstein of Vienna, to adopt the *Zeitschrift für Schulgesundheitspflege* (*Journal of School Hygiene*) as the international organ on the subject. This periodical was characterised by several of the speakers as a model of editing (Dr. Kotelmann has hitherto conducted it), and as a most effective organ for the diffusion

of sound and original ideas on the sanitary side of education.

The Congress concluded with the arrangement of the programme for its next meeting, after which a brilliant banquet took place in the Hôtel Bellevue. When the toast list had been got through, there followed a delightful voyage on the lake to the historic island of Ufenau, and the evening closed most enjoyably with a "Venezianische Nacht."

Zurich, August 16th.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN twenty-eight of the largest English towns 5484 births and 3153 deaths were registered during the week ending September 1st. The annual rate of mortality in these towns, was equal to 17·5 per 1000. During the week ending Sept. 8th 5539 births and 3205 deaths were registered in these towns. The annual rate of mortality, which had been 16·4, 18·1, and 17·5 per 1000 in the preceding three weeks, rose again last week to 17·8. During the first eight weeks of the current quarter the death-rate in these towns averaged but 16·6 per 1000, and was 4·6 below the mean rate in the corresponding periods of the ten years 1878-87. The lowest rates in these towns last week were 12·7 in Bristol, 13·9 in Brighton, 14·2 in Portsmouth, 15·1 in Nottingham, and 15·3 in Wolverhampton. The rates in the other towns ranged upwards to 22·6 in Manchester, 22·8 in Leicester, 24·4 in Leeds, 24·8 in Preston, and 25·1 Norwich. The deaths referred to the principal zymotic diseases, which had been 639 and 582 in the preceding two weeks, rose again last week to 638; they included 414 from diarrhœa, 66 from whooping-cough, 55 from scarlet fever, 41 from measles, 34 from "fever" (principally enteric), 28 from diphtheria, and not one from small-pox. The lowest death-rates last week from the aggregate of these zymotic diseases were recorded in Derby and Birkenhead, and the highest rates in Norwich, Preston, and Leicester. The greatest mortality from diarrhœa occurred in Birmingham, Sunderland, Bolton, Sheffield, Leeds, Norwich, Leicester, and Preston; from whooping-cough, in Norwich; from scarlet fever, in Manchester and Blackburn; and from measles, in Leicester. The mortality from "fever" was comparatively low in all the towns. The 28 deaths from diphtheria included 18 in London, 3 in Newcastle-upon-Tyne, 2 in Brighton, 2 in Manchester, and 2 in Sheffield. Small-pox caused no death either in London or in any of the twenty-seven large provincial towns. The Metropolitan Asylum Hospitals and the Highgate Small-pox Hospital contained only 1 small-pox patient at the end of the week. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital was 805 at the end of the week, against numbers increasing in the previous two weeks from 774 to 793; 79 cases were admitted during the week, against 83 and 93 in the two previous weeks. The deaths referred to diseases of the respiratory organs in London, which had been 172 and 130 in the preceding two weeks, rose again last week to 148, but were 21 below the corrected average. The causes of 66, or 2·1 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Blackburn, Bolton, Preston, and in six other smaller towns. The largest proportions of uncertified deaths were registered in Oldham, Sunderland, and Halifax.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, in the week ending Sept. 1st, was equal to 16·1 per 1000, and was 1·4 below the mean rate during the same week in the twenty-eight large English towns. The annual rate of mortality in these towns, which had been 17·3, 16·7, and 16·1 per 1000 in the preceding two weeks, further declined to 16·0 in the week ending September 8th; this rate was 1·8 below the mean rate during the same week in the twenty-eight large English towns. The rates in these Scotch towns ranged from 7·4 and 7·7 in Greenock and Leith, to 18·5 and 21·9 in Glasgow and Paisley. The 405 deaths in the eight towns showed a further decline of 2 from the numbers in recent weeks, and included 22 which were referred to diarrhœa, 8 to measles, 7 to diphtheria, 6 to scarlet fever, 6 to whooping-cough, 2 to "fever" (principally enteric), and not one to small-pox; in all, 51 deaths resulted from these principal zymotic diseases, against 42 and 44 in the preceding two weeks. These 51 deaths were equal to an annual rate of 2·0 per 1000, which was 1·5 below the mean rate from the same diseases in the twenty-eight English towns. The deaths attributed to diarrhœa, which had been 20, 16, and 25 in the preceding three weeks, were last week 22, of which 14 occurred in Glasgow and 3 in Paisley. The 8 fatal cases of measles exceeded the number in any recent week, and included 4 in Glasgow and 4 in Paisley. The 7 deaths from diphtheria, of which 6 occurred in Glasgow, also showed a considerable increase upon recent weekly numbers. The fatal cases of scarlet fever, which had been 4 and 5 in the preceding two weeks, rose to 6 last week, and included 2 in Dundee and 2 in Perth. Three of the 6 deaths from whooping-cough, and both the deaths from "fever," were returned in Glasgow. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 70 and 56 in the previous two weeks, rose again last week to 71, and exceeded the number in the corresponding week of last year by 5. The causes of 36, or more than 9 per cent., of the deaths registered in the eight towns during the week were not certified.

HEALTH OF DUBLIN.

The rate of mortality in Dublin was equal to 20·4 per 1000 in the week ending Sept. 1st. In the week ending Sept. 8th the rate of mortality in Dublin, which had been 17·9 and 20·4 per 1000 in the preceding two weeks, further rose to 21·7. During the first ten weeks of the current quarter the death-rate in the city averaged 19·9 per 1000, the mean rate during the same period being 16·2 in London and 16·9 in Edinburgh. The 147 deaths in Dublin showed a further increase of 9 upon the number in the previous two weeks; they included 12 which were referred to diarrhœa, 3 to "fever" (typhus, enteric, or ill-defined), 2 to scarlet fever, 2 to whooping-cough, 1 to measles, 1 to diphtheria, and not one to small-pox. Thus 21 deaths resulted from these principal zymotic diseases, against 10 and 19 in the preceding two weeks; these were equal to an annual rate of 3·1 per 1000, the rate from the same diseases being 2·9 in London and 0·6 in Edinburgh. The deaths attributed to diarrhœa, which had been but 4 and 7 in the previous two weeks, further rose last week to 12; while the fatal cases of "fever" showed a decline of 5 from the number in the previous week. The numbers of deaths from the other zymotic diseases scarcely differed from the numbers in recent weeks. Two inquest cases and 3 deaths from violence were registered; and 38, or more than a quarter, of the deaths occurred in public institutions. The causes of 18, or 12 per cent., of the deaths in the city were not certified.

THE SERVICES.

Brigade Surgeon J. Colahan, M.D., from Malta, has been appointed to the medical staff at Chatham. Surgeon Wright, from the garrison medical staff, has embarked for service at the Cape.

ARMY MEDICAL STAFF. — Deputy Surgeon-General Edmund Humphrey Roberts to retire on temporary half pay (dated Sept. 14th, 1888); Brigade Surgeon John Trehane May Symons, M.D., has been granted retired pay (dated Sept. 1st, 1888); and Brigade Surgeon Laurence Corban, M.D., is granted retired pay (dated Sept. 12th, 1888).

ARMY MEDICAL RESERVE OF OFFICERS. — Surgeon-Major Matthew Baines, M.D., resigns his commission (dated Sept. 5th, 1888). The undermentioned Acting Surgeons to be Surgeons, ranking as Captains (dated Sept. 5th, 1888):—Ernest William Skinner, M.B., 1st Cinque Ports Rifle Volunteer Corps; Andrew Alexander Watson, 3rd Lancashire Rifle Volunteer Corps; and John Hector Anderson, M.D., 5th Volunteer Battalion, the Gordon Highlanders.—Surgeon Robert de la Poer Beresford, 2nd Volunteer Battalion, the King's (Shropshire Light Infantry), to be Surgeon, ranking as Captain (dated Sept. 8th, 1888); Acting Surgeon Patrick Kynoch, 1st Roxburgh Border Mounted Rifle Volunteer Corps, to be Surgeon, ranking as Captain (dated Sept. 12th, 1888).

INDIA OFFICE.—The Queen has approved of the following admissions to the Indian Medical Service:—To be Surgeons

(dated March 31st, 1888): Bengal—Daniel Grove Marshall, David Macbeth Moir, Harry Frederick Whitchurch, James Reid Roberts, Frederick William Gee, Kanta Prasad, Patrick Wilkins O'Gorman, William Henry Gray, and George Thomas Mould. Madras—Allan Ewen Grant and Frank Charles Pereira.

ADMIRALTY.—The Admiralty have approved the following proposals of the Inspector-General of Haslar Hospital relative to a course of lectures, &c., for medical officers of all ranks:—All senior medical officers of ships and establishments at Portsmouth are invited to attend the laboratory at Haslar Hospital as frequently as their duties will permit to carry out a course of practical analytical instruction. The Surgeons of ships and establishments are to attend the course of lectures and practical work in the laboratory as regularly as their ordinary duties will permit. Medical officers of all ranks on half pay resident in the neighbourhood will have the privilege of attending the lectures and working in the laboratory, and also of being present at post-mortem examinations. No expense of any kind is to be incurred in carying out these courses.—In accordance with the provisions of Her Majesty's Order in Council of April 1st, 1881, Fleet Surgeons George Henry Madeley and James Dear Smith, M.D., have been placed on the Retired List of their rank, the latter at his own request.

The following appointments have been made:—Fleet Surgeon William D. Longfield, to the *Himalaya* (dated Sept. 11th, 1888); Staff Surgeon J. Irvine, to the *Flora*, additional, and Staff Surgeon W. E. Bretton, M.D., to the *Active* (both dated Sept. 5th, 1888); Fleet Surgeon William H. Stewart, to the *Malabar*; Fleet Surgeon Richard S. P. Griffiths, to the *Serapis*; Staff Surgeon Thomas M. Sibbald, to the *Canada*; Surgeon Walter G. Axford, to the *Bellerophon*, additional; and Surgeon Edward J. Morley, to the *Lion* (all to date Sept. 12th, 1888).

YEOMANRY CAVALRY.—Surgeon H. P. Welchman resigns his commission (dated Sept. 5th, 1888).

VOLUNTEER CORPS.—*Artillery:* 2nd Volunteer (Devonshire) Brigade, Western Division, Royal Artillery: George Miles, Gent., late Honorary Assistant Surgeon, to be Acting Surgeon (dated Sept. 5th, 1888).—1st Orkney: Acting Surgeon T. P. Develin resigns his appointment (dated Sept. 5th, 1888).—*Rifle:* 1st Volunteer Battalion, the Leicestershire Regiment: Arthur Nathaniel Barnley, Gent., to be Acting Surgeon (dated Sept. 5th, 1888).—Surgeon and Honorary Surgeon-Major C. H. Bennett, M.D., resigns his commission; also is permitted to retain his rank, and to continue to wear the uniform of the Corps on his retirement (dated Sept. 5th, 1888).—Surgeon P. B. Giles is granted the honorary rank of Surgeon-Major (dated Sept. 5th, 1888).—1st Volunteer Battalion, the Prince of Wales's Volunteers (South Lancashire Regiment): Edward Lister, Gent., to be Surgeon (dated Sept. 8th, 1888).

Correspondence.

"Audi alteram partem."

"A DICTIONARY OF MEDICAL SPECIALISTS."

To the Editors of THE LANCET.

SIRS,—On returning to town my notice has been drawn to your leading article of the 25th ult., condemning in very strong terms the handbook I have in preparation. As such an expression of opinion from you may injure a book which I believe will be of great utility to the profession, I ask you, in accordance with your motto *audi alteram partem*, to give due prominence to an apology for my proposed "Dictionary," as I think your censure upon me is based upon insufficient information.

First as to the origin of the work. The idea was casually suggested to me by a provincial surgeon in general practice, and after consideration my judgment favoured such a work as likely to be of practical utility. I saw at once that it ought to be compiled, not by a medical man, but by one independent of the profession. Hence I determined to undertake the task. Then, to prevent all possibility of it becoming a mere advertisement for those anxious to dub themselves "specialist," and with the view that the qualification should act automatically, it was determined that those only should be admitted who had been associated with some recognised hospital or school of medicine, thus ensuring the inclusion only of men of standing, to whom my work will be no more an advertisement than is Churchill's Directory or a hospital prospectus.

Now to deal with your objections to the work. You refer to the evils of specialism which the Dictionary may stimulate. That there may be evils in specialism can be readily admitted, but they will not be cured by leading a young man of twenty-one to think that the appearance of his name in the Medical Register proves that he is "*fully* qualified to pursue all branches of practice." I ask, who would allow such a youth fresh from the schools to operate for a cataract or to cut for stone? The services of a specialist would be certainly sought for. The law has for centuries recognised three specialists—the physician, the surgeon, and the apothecary,—while public and professional opinion has long recognised many others. Has not good rather than evil arisen from the growth of the specialist in diseases of the eye, the mind, women and children, the teeth, &c.? And to take further specialisation, are there not men who are eminent for, and have done much service by, their skill in lithotomy and ovariotomy? It seems to me, in view of the extent of purely legitimate specialisation in the present day, it is mere affectation to attempt to ignore it, especially as the profession and leaders in the profession seek to accentuate it by the formation of special societies, special journals, special hospitals, and special wards in general hospitals. As you say, the "discovery of this specialisation is the work of the public and the profession combined," and my Dictionary merely aims at assisting the discovery by giving lists of those engaged in special practice, with the individual information usual in such handbooks. At present similar information is open to all, but it can only be gathered by diligently scanning hospital prospectuses or the catalogues of medical booksellers, and then turning up the names in Churchill's Directory, in which the practitioners' qualifications are "advertised" or "made known." Wherein do I sin by attempting to save this waste of labour? It is not correct to say that "here is an attempt to advertise that a man is fully qualified only to practise one branch, or rather a bit of one." My Dictionary will simply state that the practitioner has attained special skill in one or more branches, and not that he is ignorant of the rest of his profession. In my prospectus I state that "the inclusion of a name in this list of specialists must not be taken to indicate that the practitioner necessarily devotes the whole of his time to special work, for some leading specialists also occupy themselves with general practice." This wholly removes an objection on your part which otherwise would have been of great weight. As to your suggestion that the practitioner aggrieved by the insertion of his name should consult his lawyer, I need only remark that he will but benefit my profession without doing himself any good, for happily it is no offence in this country to compliment a man by publishing of him that he is unusually well qualified in some branch of his profession when such happens to be the case. Fortunately, the very numerous and carefully filled up returns which I find awaiting me clearly indicate that the profession is not in agreement with the opinions embodied in your leading article. I may mention that thirty-one gentlemen have written to me asking that their names may be omitted. Twelve of them show good causes, such as retirement from practice, or that I am in error in styling them "specialist." Of the remaining nineteen, all, with one exception, are now attached to some hospital and pursue some specialty, many of them. I may remark, in conjunction with general practice. A few of the replies I now give—of course, without names. "A" states that he is not a "specialist"; but I find that he is advertised in a hospital prospectus as attending to "diseases of the throat." "B," who also objects to such an "advertisement" as my book, and refers to his lawyers, advertises of himself that he qualified at some foreign university, *summâ cum laude*, and writes from the office of a highly specialised journal. "C," who also threatens me somewhat curtly with legal proceedings, is surgeon to a highly specialised hospital. "D" announces to me in very abrupt fashion a similar intention. The value of his opinion is, however, very greatly discounted by the fact that he was one of the first to send me in an accurate return to my questions, hours of consultation included. In this case he will probably find that first thoughts are often best. The remaining letters do not call for detailed remark. I can appreciate the writers' motives,

which are due to a fear that unwittingly they may infringe those unwritten laws of the profession which proscribe advertising, though I do not think their fear well grounded.

It is worth while now to observe that lists of specialists are not altogether unknown. I say nothing of the fact that at least one teaching body grants a diploma in obstetrics and State medicine. I may point out that an official Register of Dentists already exists, while Silverlock publishes a list of specialists. A very imperfect one exists in Bradshaw's Dictionary of Bathing-places, and quite recently a list of London ophthalmic surgeons, with their addresses for the present year, has been printed. No objection, so far as I am aware, has been raised to any of these. I have but one regret in connexion with my work, and that is the exclusion of provincial specialists. I wished their names to be added, but my publisher vetoed it this year for prudential reasons.

I should be the last to attempt anything which could derogate from the honour of a profession in which through early associations and friendships with medical men I have ever been deeply interested, and to which I believe that my proposed work will in a humble way prove a distinct benefit. I trust that my remarks, which have been necessarily lengthy, may have the effect of removing some misconceptions about my proposal.

I am, Sirs, your obedient servant,

Chancery-lane, W.C., Sept. 7th, 1888. W. P. W. PHILLIMORE.

P.S. It occurs to me that some men object to the terms "specialist," and "consultant" has been suggested to me as a better word. I do not wholly agree with this, but it is a point on which I should much esteem the expression of opinion from leading members of the profession.

*** Mr. Phillimore's letter only confirms us in our objection to his most unnecessary proceeding. The casual origin of many undertakings finds a fresh illustration in his letter: the idea of the work was casually suggested to him by a provincial surgeon. He undertook the work "because he saw at once it ought not to be compiled by a medical man." We are not so quick-sighted as Mr. Phillimore, and certainly fail to see how a guide of any value is to be drawn up by a gentleman who confessedly knows nothing of the subjects or the persons, and is to be guided merely by what he sees in existing directories or advertisements of special hospitals. He finds some excuse for his advertising project in the existence of similar things already. It is curious to see the member of a learned profession defending the advertisement of a limitation of men's duties on the ground that Mr. Silverlock has afforded him a precedent. We are sure that Mr. Phillimore does not wish to be either unjust or uncomplimentary, but he threatens to be both. He proposes to ignore the whole of the specialists of the provinces, though they include some of the ablest of the profession. This surely is to be unjust. And he justifies this compilation by suggesting that it will be of use to country medical men. It is a poor compliment to country medical men to suppose that when they are called on to advise a patient in the choice of a consultant they will need to refer to Mr. Phillimore's book of random advertisements. The more detailed Mr. Phillimore becomes in his argument, the more does he fail to establish it. He declares that he will admit to his Dictionary only those who are connected with "recognised" hospitals or schools of medicine. What does Mr. Phillimore mean by the "recognition" of a hospital? Who is to recognise any given hospital before he will admit the members of its staff? What we should expect from this condition will be a multiplication of "special hospitals," one of the most pernicious developments of recent years. Mr. Phillimore must think the profession very backward in discovering merit and special faculty if its members cannot select a consulting physician or surgeon for their patients without his clerical assistance in collating the names and appointments of metropolitan medical men. We urge him to reconsider his project. He tells us that he has evidence that our views are not shared by the profession. We fail to see this. Thirty-one objectors—doubtless including the cream of London consultants—is a significant protest. Names have to be weighed rather than counted in such a matter as this. There are always some men who are ready to see their names published. But it is not those who show this feeling who will commend themselves to the profession, or who are likely to command its respect.—ED. L.

To the Editors of THE LANCET.

SIRS,—On the 13th August, during my absence from home, a printed circular was sent me with a prospectus of the above proposed new work of reference, edited by W. P. W. Phillimore, Esq., M.A., B.C.L. A printed form was also enclosed, to be filled in by myself, stating, amongst other information, in what specialism I practised my appointments, works, inventions, and hours for consultation ("intended for the benefit of country practitioners"). This form to be filled in and returned to the editor not later than August 16th. A few names of respectable "specialists" are given on a specimen page for my encouragement. Now, it is impossible for anyone seriously to work at his profession without selecting some few points of clinical study for his field of labour, and thus in a sense becoming a "specialist"; but surely his hospital appointments and published works, of which a full list is already contained in the recognised Directories, and the reputation he may have earned amongst his medical brethren and pupils, are sufficient information as to his probable usefulness for consultation purposes, without the necessity of his name being included, with the trade-mark of specialist affixed, in a popular Dictionary edited by a layman.

It is probable that the proposed publication to which I allude will be assisted by but few men of any position, but it is to be observed that the circular has been sent round at a time when many are away from town, and that only a very few days' notice is given, after which the required information will be presumably collected and recorded by the editor, without the help or sanction of the person concerned. I have no knowledge of the editor, and do not doubt his literary fitness, but from long observation of the ignorance of laymen in matters relating to the medical profession, and especially when any question of ethics arises, I cannot think this publication likely to be either a safe and useful guide to the public, for whom it is clearly intended, or an edifying book of reference for the "country practitioner."

I am Sirs, your obedient servant,

London, Sept. 1888. F.R.C.P.

"SANITATION AT MARGATE."

To the Editors of THE LANCET.

SIRS,—I think no resident in Margate can complain of your able and impartial article of the 1st inst. on the Sanitation of Margate. There are one or two points, however, to which in the interests of sanitary science it may be well to call attention.

The writer states that whilst about 2 per cent. of the cases occurred in houses which were drained, the remainder (98 per cent.) were in houses discharging their sewage into cesspools. This is not the case. There are three modes of house drainage or sewage disposal in use in Margate: 1. Drainage into the sea. 2. Drainage into cesspools. 3. The accumulation of fæcal matter in privy-pits. It was in the poor cottages using the privy-pits that the cases of typhoid occurred. The better class of houses using cesspools were as free from typhoid as those draining into the sea. All the houses in the town used the same water, but it was only in the privy-pits that the poison acquired the virulence necessary to produce typhoid. That typhoid did not occur in the lodging houses is shown by the fact that no visitor took the disease.

The inhabitants generally are anxious that the town should be well drained, but wish to avoid the errors into which so many towns have fallen. The mortality now is 15 per 1000, taking the average of the last ten years, and the zymotic mortality not above the average of health resorts. I fear that if we go in for miles of big storage sewers, with hundreds of stinking street ventilators, we shall only be jumping out of the frying-pan into the fire. If, however, we can have a system such as that of the Shone, with small sewers and quick discharge, no one will rejoice more heartily than

Your obedient servant,

Margate, Sept. 1st, 1888. A MARGATE SURGEON.

LIVERPOOL.

(From our own Correspondent.)

DEATHS FROM CARBOLIC ACID POISONING.

MORE deaths from carbolic acid poisoning have occurred. In one case it was evidently taken with a suicidal intent, but it is very much to be lamented that so deadly a poison should be sold indiscriminately, in any sort of bottle and unlabelled, even to children of tender age. In another case (making the ninth), a woman died from carbolic acid, which she had taken with a suicidal intent. The poison had been dispensed by the chemist with every precaution, both sides of the bottle being labelled "poison," and a satisfactory reason had been given for its purchase. The coroner, at the inquest, remarked on the singular fact that in all the nine cases the victims had been women. He trusted that some means might be discovered for reducing the number of these fatalities.

THE USE OF THE CANE IN SCHOOLS.

Mr. Preston, the stipendiary magistrate of Birkenhead, had recently before him the case of a female teacher charged with assaulting a girl by caning her on the hand. The magistrate expressed himself very strongly against the use of the cane for any except grave moral offences and against caning on the hands. The Birkenhead and District Teachers' Association, at a recent meeting, strongly resented the worthy magistrate's remarks, and upheld the use of the cane. While showing every sympathy with teachers in their difficult and responsible work, it cannot be denied that caning on the hands is a very cruel punishment, and as senseless as it is cruel. Its use too often means loss of temper on the part of the master or mistress, while the effects on the hands of a delicate child are often very serious. Mr. Preston's remarks are deserving of every support.

MYSTERIOUS DEATH AT SOUTHPORT.

An adjourned inquest was concluded yesterday on the body of a boy nine years of age which was found in a decomposed state in the attic of an unoccupied house in Park-avenue on the 13th ult., the attic door being locked and the key missing. Death had evidently taken place about ten days before the discovery of the body, and there was no apparent cause of death revealed at the post-mortem examination. At the adjourned inquest Dr. McNicholl stated that there was nothing inconsistent with death from suffocation or chloroform poisoning, traces of which would have disappeared in the interval which had ensued between death and the discovery of the body. It appeared that the deceased, with some other children, went, on Aug. 1st, to play on swings in Hesketh-park, and nothing more was seen or heard of him till the discovery of his body on the 13th. The jury returned an open verdict.

Liverpool, Sept 12th.

BIRMINGHAM.

(From our own Correspondent.)

THE MUSICAL FESTIVAL.

THE musical festival recently held in this town was attended by a large and fashionable audience, and, as usual, was productive of new compositions which attracted much interest. The results, from a musical point of view, with regard to talent and performance are said by trustworthy critics to have been eminently satisfactory. The financial statement has not yet appeared, but it is known that there is a deficiency of some £2600 odd in the proceeds; at the same time, the working expenses have been considerably reduced, so that it is not possible to draw any conclusion at present as to the net profits. It is to be hoped that there will be a substantial balance to hand over to the General Hospital, on behalf of which the festival is held. The committee found a zealous and generous patron in the president, his Grace the Duke of Norfolk, who not only attended punctually all the meetings, in which he took an active interest, but who also contributed largely to the funds.

SANITARY ADDITIONS TO THE GENERAL HOSPITAL.

By the liberality of Mr. J. C. Holder, one of the members of the hospital committee, large and important additions have been made for the better arrangement of the closets and bath-rooms in connexion with a number of the wards. These consist of two blocks of buildings outside the main building, running as far as the top and entered from the wards themselves. Free ventilation is thus ensured and all smells done away with. A great advantage is gained in convenience and sanitation, as well as in the comfort and health-condition of the inmates.

AN UNSOLVED MYSTERY.

Murder has of late been often surrounded by mysterious circumstances. In the history of crime in this town there has been nothing known to baffle inquiry more seriously than the recent death of a child six months old by a strange and exceptionally cruel mode of murder. It seems that the child was left by its mother in a perambulator in the house, under the care of two children, a boy and a girl, the only other occupant being the grandfather of the infant. This man was in a state of semi-intoxication asleep upon a sofa. On the mother's return she alleges that she found the child with a deep cut above the ankle of one leg, and she at once took it to a doctor, who sewed up the wound. When she returned home she discovered that the opposite foot was nearly severed from the leg. The child was taken to the hospital, where it died in half an hour from loss of blood, the foot having been cut off just above the ankle, being attached only by a bit of skin. The two children were at first charged on suspicion, but were subsequently liberated by the magistrates. A patient inquiry by the coroner resulted in an open verdict of wilful murder against some person or persons unknown. At present therefore the crime is undiscovered, and the murderer of the hapless infant is at large.

Sept. 12th, 1888.

NORTHERN COUNTIES NOTES.

(From our own Correspondent.)

CARLISLE.

THE Hospital Sunday Fund Committee of Carlisle had a meeting on Aug. 29th for the purpose of distributing the present year's collections. The total receipts of the Sunday and Saturday Funds amounted to £1309 4*s.* 9*d.*, being an increase of £27 15*s.* 10*d.* on the amount raised last year. The Workington Infirmary is added to the list of recipients this year for the first time. The principle adopted in the distribution has been *pro rata* as to the expenditure of each institution, the Cumberland Infirmary at Carlisle getting £650 and the five other minor institutions in proportion to their expenditure. The Whitehaven representative took exception to the system of distribution, which includes a special gift to some of the institutions, but the mayor, who presided, said the allocation was only experimental. It is pointed out by the local press that some of the charities, such as the Carlisle Dispensary, suffer under the new scheme.

THE BRITISH ASSOCIATION.

The British Association, after an interval of twenty years, returns to Newcastle-on-Tyne next year, and good progress is being made here with the preliminary work for its reception. The Mayor is to be chairman of the local committee, and, on the motion of Lord Armstrong, Professor Philipson has been elected vice-chairman. Even at this early period matters augur well for a successful meeting in 1889.

THE NEWCASTLE COLLEGE OF MEDICINE.

The old College has been taken possession of by the North Eastern Railway Company, but the new building has made rapid strides during the last few weeks, and will be quite ready to allow work in some of its departments to commence with the opening of the session in October. I hear that a very large number of candidates intend presenting themselves for the various medical degrees in connexion with the University of Durham, at the examinations to be held this month in Newcastle. For the first M.B. and the second M.B. there are over ninety entries, and these with other candidates for the licence in Sanitary Science will bring up the total to about a hundred.

MIDDLESBROUGH.

Mr. C. W. Currie, M.R.C.S., practising in Middlesbrough, died on Tuesday, August 28th, after an illness of five days. The newspaper notice mentioned the cause of death as pneumonia, but, in view of the late epidemic of pneumonia in the borough, I have taken some pains to get

at the cause of death, which is shortly as follows. Mr. Currie was sixty-eight years of age, was naturally delicate, with a permanently weak heart; he had not been attending any pneumonia cases for some time, but on the Friday preceding his death he got a chill and sore throat when attending a case of abortion; his throat symptoms increased and developed into laryngitis, and during the last forty-eight hours of his illness he had some pulmonary congestion, but never any of the prominent symptoms of pneumonia. His remains were removed to London for interment.

SUNDERLAND: THE HORSE.

Apart from the interest attaching to the horse as the useful servant of most medical practitioners, the paper read by Mr. Clement Stephenson of Newcastle last week before the North of England Veterinary Association at Sunderland, on Hereditary Unsoundness in Horses, has more than a passing interest. In his paper he treated, in an exhaustive and interesting manner, of the various diseases of eye, feet, &c., which he considered hereditary in breeding horses. "He was confident the more they investigated the subject in the animal and vegetable world, the more they would believe in the subtle and far-reaching power of hereditary influence. Therefore, only sound, good-looking animals should be bred from. The sire, particularly, should be sound, and true to his type."

BAROMETRIC DISTURBANCE AND MINE EXPLOSIONS.

Following close upon or simultaneous with a warning issued from the Meteorological Department on Friday last, to miners, an explosion took place at Chester Moor, near Durham, the same day, whereby six men were severely injured. Two were taken to the Durham County Hospital, and the others were immediately treated, on the spot, by Dr. Duncan of Chester-le-Street.

Newcastle, Sept. 4th.

DUBLIN.

(*From our own Correspondent.*)

MEATH HOSPITAL, DUBLIN.

THE "Bury Memorial Wards" being now completed, and provided with everything necessary for the reception of patients, his Excellency the Lord-Lieutenant and the Marchioness of Londonderry will open them, and also the "Barber Memorial Wing," on the 25th inst. The Countess of Meath has been elected a life governess of the hospital.

REFORMATORY AND INDUSTRIAL SCHOOLS, IRELAND.

The twenty-sixth report has recently been issued, and from it I learn that the inmates of reformatory schools at the close of 1887 were less in number than at any period during the past seventeen years. Of the 728 male inmates, 5 died last year—viz., 2 from lung disease, and 1 each from brain disease, heart disease, and septicæmia. Of the 1311 inmates of industrial schools, 27 boys and 52 girls died in the schools during 1887, the vast majority of the deaths being due to affections of the lungs. The educational status of young persons admitted year after year into industrial schools in Ireland plainly evinces the deplorably illiterate condition of the class of children from which the inmates of these institutions are taken. Of the 1311 inmates, 753 were unable to read or write, or about 57 per cent. were when admitted quite illiterate. The returns of previous years likewise afford evidence that the normal educational status of children sent to these institutions yearly deteriorates.

THE DRAINAGE OF KINGSTOWN.

Kingstown is a seaside resort situated about seven miles from Dublin, and contains about 22,000 inhabitants. The drainage arrangements of the place were, however, not all that could be desired, and it was agreed by those who took an interest in its prosperity that to maintain its position as the premier township, and to establish its reputation as a health resort, the entire foreshore of Kingstown should be freed from the pollution arising from the discharge of sewage. A committee of ratepayers was formed some time since to take this matter into consideration, and recently a deputation waited on the town commissioners to secure their support and assistance. It is proposed to obtain a loan from the Local Government Board to construct a sea wall at low-water mark along Scotchman's Bay, and to form a marine promenade, also an intercepting sewer to carry all sewage of the district into deep water. The estimated cost of an intercepting sewer from the Board of Works' outfall at the West Pier to a point in the immediate vicinity of the Dalkey outfall at Bullock, together with an esplanade thirty feet wide and over a mile in length, which will enclose a space of about twenty acres along the shore of Scotchman's Bay, which enclosed space it is proposed, when filled in, shall form a public park, is £45,000. The commissioners have referred the consideration of the matter to a special committee, who are empowered to consult such counsel and engineers as may be deemed advisable. With the natural advantages which Kingstown possesses, its pretty harbour, and its lovely scenery, the proposed undertaking, if carried out, will place the township in the pre-eminent position it should undoubtedly occupy.

IRISH PRISONS.

From the tenth report of the General Prisons Board, it appears that there has been a reduction in the number of local prisons, and a saving in outlay of £2800. Since 1879, up to March last, the board have expended over £56,000 in the erection of new buildings, important structural alterations, sanitary works, water supply, and other permanent improvements. There has been for many years, it is satisfactory to learn, a gradual diminution in the number of convicts, both male and female, and more especially is that decline perceptible since the local and convict prisons have been placed under one central control. This result is largely attributed to the deterrent influence and improved management of both local and convict prisons since the passing of the Prisons Act of 1877.

THE M'GOVERN TREATMENT OF HYDROPHOBIA.

The Armagh guardians recently passed a resolution granting a sum of £2 to Mr. P. M'Govern, of Clan, co. Cavan, for his services in treating a boy named McGeery, who had been bitten by a rabid dog. The Local Government Board have, however, refused to sanction the proposed payment, inasmuch as Mr. M'Govern's house could not be deemed a hospital or infirmary to which workhouse inmates might be sent for special treatment under Section 7 of the Act 25 and 26 Vic., cap. 83.

FOOTBALL CASUALTY.

On Sunday last a man named Heeney, whilst playing in a football match near Navan, received such severe injuries that he died during the same evening.

Dublin, Sept. 11th.

BELFAST.

(*From our own Correspondent.*)

POISONING BY CARBOLIC ACID.

A VERY melancholy occurrence took place at the Royal Hospital on Sept. 6th. It would seem that a patient, twenty-five years of age, was admitted to this institution about five weeks ago suffering from hip disease. On Thursday he had been ordered a dose of "black draught." On that day an assistant nurse for the ward in which the patient was located received as usual the required medicines for the several patients in the ward from the apothecary's department. They were taken to the ward on a tray, and included a bottle labelled "carbolic acid—crude poison." The nurse in charge of the ward gave in mistake to the young man the bottle containing the carbolic acid, and he received a good part of two ounces. He immediately stated that the medicine was not right, and the nurse, who thought at the time she had acted properly, partook of the contents of the bottle herself to prove her assertion. Immediately afterwards, on recognising her mistake, she summoned aid, but, in spite of everything that could be done by the resident and one of the attending members of the staff, the young man expired shortly afterwards. The nurse herself has been very ill, but is now out of danger. An inquest was opened on Friday, but after some evidence had been given it was adjourned until the nurse would be able to be present. She is at present under arrest.

Belfast, Sept. 12th.

MEDICAL MAGISTRATES.—Mr. W. E. Evans Kershaw, Beech House, Middleton, L.F.P.S. Glas., F.R.C.S. Edin., and Mr. W. H. Hughes, Latchford House, Ashton-under-Lyne, M.R.C.S., L.S.A., have been placed on the Commission of the Peace for the county of Lancaster.

PARIS

(From our own Correspondent.)

RABIES IN RUMINANTS.

AMONG the papers recently communicated to the Société Nationale d'Acclimatation may be cited one on Rabies in Ruminating Animals, by M. Pion, veterinary inspector of the slaughter yards at La Villette, and which has been reproduced in the *Journal Officiel* of Aug. 27th, 1888. In a general way, rabies in the bovine species has, according to M. Pion, neither the violence nor the intensity which is observed in dogs. The author thus explains the cause of the difference. The bovine animals, being peaceful, are not so subject to being bitten. On the other hand, the earlier authors who had described the malady had greatly exaggerated the symptoms. It is now known that, thanks to more careful observations, rabies, as a rule, is not in the ox so dangerous or so terrifying. The author then describes certain symptoms which more or less resemble those of rabies, and are consequently often mistaken for the latter malady. The late M. H. Bouley, the well-known veterinarian, however, in his work on Rabies in the Bovine Species, summarises as follows the progress of the disease as observed by him in twenty-seven cases. First day: Slight colicky pains, or something more or less analogous, as the animal no sooner lies down than he gets up again. The senses are excited; there is a very sudden rising of the temperature; pruriginous pains at the seat of the bite. Second day: Less agitation; slight tenesmus; diminution of the temperature of the body, as well as that at the seat of the bite. Third day: Commencing paraplegia; strong tenesmus, with rejection of fæcal matter, covered with mucus of a yellowish-brown tint; insensitiveness of the vertebral column; decreasing temperature. These symptoms are accompanied by bellowing. Fourth day: Complete paraplegia; violent tenesmus; excrement covered with frothy mucus; foaming at the mouth; bellowing more frequent. Fifth day: Same symptoms, with considerable diminution of the temperature; bellowing more rare; sense of taste not impaired. The period of incubation has been exactly ascertained, as the same dog had infected the twenty-seven oxen noted above, which were dispersed among a herd of eighty. The average period was from three to six weeks in three-fourths of these animals; in the remainder it lasted from six weeks to three months. All treatment was inefficacious. The principal lesions—indeed, the only ones—were observed on the spinal marrow, which was redder than it ordinarily is, and dotted, particularly about the level of the loins, with numerous spots in the form of lentils. In other parts nothing particular was seen. Inoculations practised on rabbits with the saliva and with portions of the bulb, diluted, transmitted rabies. But nowhere, not even in the cases cited, was it seen that rabies had been inoculated mediately or immediately from one herbivorous animal to another. Things must have happened otherwise among the deer of Richmond Park.

M. PASTEUR'S INOCULATIONS.

M. Pasteur has had a run of ill-luck with his antirabic inoculations lately, as reported by the *Semaine Médicale*. On the 23rd of July last a man aged twenty-eight years died of rabies at the Hôtel Dieu of St. Etienne. He had been bitten by a rabid cat on the 16th of June, and was treated at the Pasteur Institute at Paris from June 20th to July 7th. After having completed his treatment by the antirabic inoculations, the man returned to his work as a domestic at St. Etienne, where the first symptoms of rabies manifested themselves on the 18th of July, that is thirty-two days after he had been bitten. On August 8th a young man aged twenty-two years died at the Necker Hospital at Paris, from convulsive rabies. He had been bitten by a mad dog on the 13th of July and was treated at the Pasteur Institute from the 16th. Death from rabies took place twenty-six days after the bite. On the 20th of June last a child eighteen months old died from rabies at Gentilly (Seine), thirty-six days after having been bitten by a rabid dog and inoculated at the Pasteur Institute. The child, who had been bitten on the 15th of May last, was first treated by the doctor of the place. Two days after—that is, the 17th—the inoculations were commenced and continued for twenty-four days. The first symptoms became manifest about the eighth day after the completion of the treatment by the antirabic inoculations. A child at Marseilles aged thirty-one months, who was bitten on May 9th last by a rabid dog, and treated at the Pasteur Institute from May 14th to June 9th, died from rabies on June 23rd—fourteen days after the end of the treatment. An inhabitant of Chatenay, aged forty-four years, who was bitten on March 25th last by a rabid cat, and treated at the Pasteur Institute from March 26th to April 12th, died from rabies on July 30th. Madame Sarazin, of Saint-Maurice, in Switzerland, aged forty-four years, who was bitten on July 1st last by a mad dog, and treated at the Pasteur Institute from the 4th of the same month, died from rabies at the Hôpital Broussais in Paris on August 4th. To this list may be added the name of a workman of Chatenay, called Labeaume, who died from convulsive rabies at the beginning of the month of July last at the Hospital of Versailles, but who had not undergone the treatment regularly. Bitten on May 29th, 1888, by a rabid cat, Labeaume was put under treatment on the 30th of the same month, but he left the Pasteur Institute on June 2nd without signifying his intention to do so, and only returned on the 14th. At that time he experienced severe pains in the bitten arm, accompanied with headache. The inoculations were resumed and continued till June 29th.

TUBERCULOSIS.

Dr. Frémy, hospital physician, is charged with a mission to the United States, with the view of visiting the private and public establishments of that country that are devoted to the treatment of tuberculosis.

Paris, Sept. 11th.

EGYPT.

(From our own Correspondent.)

REPORT OF THE SANITARY DEPARTMENT.

PROBABLY for the first time in the history of Egypt the Public Health branch of the Government has issued a report. It treats only of the year 1887, and its well-wishers hope that it may now be an annual institution and gradually improve every year. Three-fourths of it is in English, being mostly contributed by English officials, and the remainder, in French, consists chiefly of translations from Arabic reports. The list of *personnel* includes 300 for the various medical services, 540 hospital attendants, and 620 workmen for watering and scavenging the streets, besides a huge number of unpaid barbers and midwives for country work; 2444 barbers and 4612 midwives are exempted from taxes to a slight extent, and pick up a livelihood by vaccination and minor surgery. During the year the provincial doctors were called upon to write no less than 8440 medico-legal reports for the police and law courts. Towards the end of the year eight dispensaries were opened in different towns, and treated large numbers of patients, most of whom were able to pay a small fee. A self-supporting Government dispensary in every large town would be a great boon. Registration of births and deaths is now carried out more thoroughly than it has ever been before; but, as statistics of the villages emanate from the barbers, and these worthies are generally unable to read and write, it is difficult to see how they can be made quite accurate. There is a temptation to conceal births on account of the future army conscription, and an excessive death-rate is hidden at first by trying to extend it over many succeeding weeks. Every village of more than 300 inhabitants is now supplied with a register, and of such villages there are about 4000. Smaller hamlets are supposed to supply statistics to the nearest village.

HOSPITAL ENTRIES.

There is a great improvement in the willingness of both men and women to enter the twenty-one hospitals of the Government. Only five years ago natives never entered these buildings unless they were sent there by the police. The year's figures show 11,674 admissions, of which half the number entered Cairo and Alexandria hospitals. At Cairo, where there is a large out-patient department, the attendance was upwards of 30,000, the prescriptions dispensed having been about 17,000.

IMPROVEMENTS AT ASSIONT.

Here an energetic and intelligent native doctor has succeeded in getting a stagnant pond filled up, and also several

pits caused by brickmaking. The latrines and cesspools attached to the eight mosques were cleansed and disinfected, and this alone is a radical and rare reform. The slaughterhouse has been moved to a more suitable place, and the butchers now transport meat in carts instead of carrying it, exposed to flies, on their backs. The townspeople have commenced to have their night soil removed in closed barrels to trenches outside the town, the practice formerly having been to bury it in the interior of their houses.

PUERPERAL FEVER AT ISMAILIA.

There were lately three fatal cases of this disease, all attended by the same midwife. The doctor suspended and disinfected her for three weeks, after which no more cases occurred. Here, as elsewhere, the number of vaccinations exceeds the births. This is due to children unvaccinated in former years being hunted up by an incumbent more energetic than his predecessor. Revaccination of adults is rare.

PORT SAID HOSPITAL.

The Government hospital is under the management of a Scotch doctor, and has a daily average of 59 in-patients. This is the highest daily average ever reached at Port Said. The patients, besides natives, are of 11 European nationalities, chiefly Italian, Greek, French, and English. Of the deaths during 1887 more than one-fourth were due to a small-pox epidemic, the next most common cause of death being chronic diarrhœa among Turkish soldiers, who are sometimes landed in a dying condition. An out-patient service has recently been opened, and nearly 2000 cases were treated during the year. A new pavilion has been opened, consisting of two wards, for 50 patients, and allowing each 2000 cubic feet. Among other improvements, bath-rooms and washhouses, with hot and cold water, have been newly built. The chief blot on this hospital is the absence of nursing, this being entirely left to untrained hospital attendants. The linenry, laundry, and kitchen are well presided over by *sœurs de charité*. The small-pox epidemic existed for a year, ending in June, 1887, and attacked 437, of whom 157, or nearly 36 per cent., died. The total vaccinations of children and adults were 6216, in spite of a widespread belief among the natives that this operation during an epidemic would only serve to spread small-pox.

VETERINARY SERVICE.

The first authentic case of rabies occurred in Egypt in August, 1886, and in the following January a second case was found in an English dog in Cairo; while in June, 1887, a third case was reported from a village near Cairo, the dog having bitten eleven individuals, three of whom are said to have died of hydrophobia. This small record of rabies is very satisfactory, when it is remembered that Egypt contains thousands of dogs in a half-savage condition. During the past year there were eighteen cases reported, and probably others unreported, of glanders and farcy, but none communicated to man. Pleuro-pneumonia occurred among buffaloes and bullocks in three different provinces, but was easily checked by the sanitary measures adopted.

HELOUAN-LES-BAINS.

This little suburb of Cairo, with its sulphur baths, is becoming more and more popular, on account of its proximity to the capital and its dry pure desert air. During the winter months it is frequented by consumptive and other lung patients, while the baths are chiefly used by rheumatic invalids, who declare the waters to be stronger than those of Aix-les-Bains. During 1887, 9853 baths were taken, the greatest number being in February, March, and December.

STREET SCAVENGING SERVICE.

The Cairo streets are certainly kept cleaner since the work was made a branch of the sanitary department. Business streets are swept now six times a day, large streets twice, and small streets once daily. In addition to watering the roads during the day, an area of about 750,000 square yards, twenty-five water-carts and drivers are kept on duty each night for the supply of water to the fire-engine pumps, which depend chiefly on this for water. The introduction of mechanical sweeping machines has proved a great boon after heavy rain.

TYPHUS FEVER IN ONE VILLAGE.

Another curious instance has just occurred of typhus slumbering in a village in Dakahlieh province, and not spreading to the neighbourhood. In May there would seem to have been a few cases of small-pox and relapsing fever, and the monthly deaths in the hamlet rose from seven to sixteen, and in June to twenty-two. In July an energetic native doctor was sent to the spot, and found thirty-five persons suffering from typhus, of whom twenty-six were cured and nine died. The villagers, as usual, tried to hide their sick, one being discovered in a house almost completely buried in chopped straw. In order to try to shorten the doctor's visit they did their best to prevent him from obtaining food. This little outbreak is now at an end, free aeration having proved too much for it.

REPORTS OF EPIDEMIC DISEASES.

Last year small-pox was reported from seven of the fourteen provinces of Egypt, relapsing fever from eight, measles from two, and "gastric fever" from one.

Cairo, Aug. 31st.

Obituary.

LUKE ARMSTRONG, M.D., M.R.C.S.

WE regret to have to record the death, at Cullercoats, on the 9th inst., of Dr. Luke Armstrong of Newcastle-on-Tyne. Born in the Tynedale district in 1835, the deceased received his professional education at the Newcastle College of Medicine, receiving his diploma as a Member of the Royal College of Surgeons of England, and becoming a Licentiate of the Royal College of Physicians of Edinburgh in 1860. In 1872 he obtained the degree of M.D. at the University of Durham. As a member of the Newcastle College of Medicine, he took an active part in the movement by which, in 1870, that institution became the University of Durham Faculty of Medicine; and equally interested was he (although here failing health somewhat hampered his action) in the measures taken for the construction of the new Collegiate building now rapidly approaching completion in the Bath-road, Northumberland-street.

Dr. Armstrong was lecturer on Operative Surgery and registrar to the College, and was president of the Northumberland and Durham Medical Society in the period 1879-81. It may be mentioned that his appointment as lecturer to the College of Medicine dates from 1864, and he was appointed registrar in 1870. In 1865 he was selected surgeon to the Newcastle Dispensary, and for several years held that post. Three years after gaining that appointment he was elected assistant surgeon to the Infirmary, and in 1870 he succeeded to the post of full surgeon of that institution. In 1885 his term of fifteen years' service in that capacity expired, and he was unanimously reappointed by the governors for another term of fifteen years. Amongst the other offices which he filled may be noted that of representative of the College of Medicine on the governing body of the College of Science. He also held the appointment of surgeon-major to the First Northumberland Artillery Volunteers, the senior corps of that arm of service in the kingdom.

For some time Dr. Armstrong had suffered from diabetes; indeed he had never for the last six years enjoyed robust health. His decease, however, was somewhat sudden, and is mourned by all with whom, in his private, public, or professional capacity, he had been brought in contact.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—The following candidates having passed the qualifying examination in Medicine, Surgery, and Midwifery, have received certificates entitling them to practise in the same, and have been admitted as Licentiates of the Society:—

Adams, C. Rutherford, St. Thos.'s Hosp. and Newcastle-on-Tyne.
Cochrane, Jas. MacKeand, M.D., C.M. Ontario, Toronto Hospital.
Davis, Harry, University College.
Francis, Lloyd, M.D. Oxon., M.R.C.S., L.R.C.P.Ed., London Hosp.
Livsey, William Edwd., Univ. Coll. and Liverpool Royal Infirmary.
Masters, Alfred Thomas, St. Mary's Hospital.
Mitchell, Elizabeth Simpson, Kingston Gen. Hospital, Canada.
Preston, Francis Harrison, St. Bartholomew's Hospital.
Stover, Herbert Charles, Guy's Hospital.

The following passed in Surgery:—

Baly, P. P., Queen's Coll., Birm.
Baxter, C. E., Char.-cross Hosp.
Bentley, W. I., Owens Coll.
Case, W., King's College.
Hewlett, R. T., King's College.
Hoyle, J. C., St. Barth. Hosp.
Knight, E., Univ. Coll, Bristol.
Rudyard, H. A., Univ. Coll.
Snell, E. S., Univ. Coll.
Spurgin, F. C., Middlesex Hosp.

The following passed in Medicine:—

Brightman, F., Univ. College.	Marshall, C. F., Owens College.
Foster, J. E., Birmingham.	Slyman, W. B., St. Barth. Hosp.
Gordon, J. H., Bir. and Univ. Dur.	Vermaak, H., Queen's Coll., Bir.
Horton, A. J., Qu. Coll., Birm.	Wood, F. L., Owens College.

The following passed in Midwifery:—

Crompton, A., St. Bartholomew's Hospital.

LAMBETH INFIRMARY.—Within the past two years twenty members of the nursing staff of this infirmary have availed themselves of the midwifery practice of this Poor-law Institution, under the supervision and direction of Dr. Rugg, senior assistant medical officer, and obtained the diploma of the Obstetrical Society as certified midwives.

PRESENTATION.—On the 5th inst. Dr. T. W. Hime, lately medical officer for the Borough of Bradford, was presented with a purse containing £460, as a slight recognition of the services he has rendered to the town of Bradford during his tenure of office, and as a token of the friendship and esteem of the subscribers.

ST. GEORGE'S HOSPITAL.—The distribution of prizes will take place this year immediately after the inaugural address, which will be delivered by Dr. Ewart at 4 P.M. Professor Humphry of Cambridge has consented to deliver the prizes, and the proceedings will take place in the board-room of the hospital.

AMALGAMATION OF THE GENERAL AND EYE HOSPITALS, SWANSEA.—On the 7th instant a special meeting of the subscribers to the Swansea Hospital was held to consider a scheme for the amalgamation of the Swansea Eye Hospital with the General Hospital. Mr. W. Stone presided. The conditions proposed were approved, and a resolution was agreed to, that on the basis provided by them an amalgamation should be effected between the two committees, and power was given to carry out the necessary details.

THE SOUTHAMPTON VOLUNTEER AMBULANCE.—An ambulance detachment, or bearer section, of the 2nd Volunteer Battalion Hampshire Regiment, paid a visit to the Royal Victoria Hospital, Netley, on Saturday last. The party consisted of Surgeon Wade, a sergeant, and thirteen men. Upon arrival at the hospital they were met by Staff Sergeant Miller, of the Medical Staff Corps, who conducted them through the museums, wards, &c., the appliances for ambulance work in the field being especially interesting. This was the second visit to the hospital made by the 2nd Hants bearers.

THE STRATFORD-ON-AVON HOSPITAL.—Sir Arthur Hodgson presided at the annual meeting of the governors, held on the 26th ult. The financial statement showed the income had been £826 1*s.* 9*d.* and the expenditure £963 3*s.* 11*d.*, exhibiting a deficit of £137 2*s.* 2*d.* The Rev. W. Bannand of Alveston subscribed £100 towards the extinction of last year's debt, and this being supplemented by other subscriptions to the amount of £154, the debt was discharged. Mr. Bannand also gave £105 as an annual 10 guineas subscriptions for the next ten years (his fifth life subscription to the institution).

PROVINCIAL HOSPITAL SUNDAY AND SATURDAY COLLECTIONS.—The Hertford Hospital Sunday collection realised £63 8*s.* 8*d.*, which has been paid over to the Herts Convalescent Home. The Hospital Sunday at St Michael's, East Teignmouth, in aid of the General Maintenance Fund of the Teignmouth Infirmary and Convalescent Home, produced £50. The offertories at the Slough churches on Sunday last, on behalf of the parish Convalescent Fund, amounted to £14. The Friendly Societies demonstration, held in Swindon and the neighbourhood, on the 2nd inst., in aid of the Swindon Victoria Hospital, produced about £62. The Watford Hospital demonstration, held on the 5th inst., realised £134, of which £62 has been handed over to the Watford District Cottage Hospital, £62 to the Hertfordshire Seaside Convalescent Home, and £10 to the Watford Nurses' Fund.

THE ANIMALS' INSTITUTE, Kinnerton-street, Wilton-place, S.W., which was only opened this season for the reception of patients, has already more than verified its founder's fears that much suffering amongst the animals of the poorer class existed without proper surgical treatment. The gratuitous advice daily given is taken full advantage of, and the hospital accommodation for the worst cases is now too small to admit the great number of horses, dogs, cats, and other animals requiring treatment. A supplementary institution is wanted—a sanatorium in the suburbs—where cases requiring prolonged treatment, careful dietary, and rest can be kept. Such an addition, if the preliminary expenses were forthcoming, can, it is stated, be made quite self-supporting, and by utilising the accommodation for paying patients be made even a source of income to the parent institution. The scheme is to be placed on a practical basis at a meeting to be held shortly in the committee room of the Animals' Institute.

BEQUESTS AND DONATIONS TO HOSPITALS.—The Baroness Sudeley, late of Toddington, Gloucestershire, has bequeathed £250 to the St. Raphael's Convalescent Home, Torquay.—The late Miss Lowther has left by her will £1000 to the Whitehaven Infirmary.—The treasurer of the Salford Royal Hospital has received from the executors of the late Mr. J. Worrall Walker, formerly of Salford, £1396 3*s.* 8*d.*, bequeathed to that charity.—The residuary legatees of the late Sir Joseph Whitworth are engaged in distributing the following further gifts to charitable institutions:—Stockport Infirmary, £1000; Infirmary at Derby, £2000; Clinical Hospital, £2000; Hospital for Sick Children, £1000; Manchester Infirmary, £1000; St. Mary's Hospital, £1000; Ancoats Hospital, £1000; Salford and Pendleton Hospital, £1000; Sick Poor and Nursing Institute, £1000; Lock Hospital, £500; and Southern Hospital, £500.

BOOKS ETC. RECEIVED.

BAILLIÈRE, J. B., Paris.

La Thérapeutique Médico-Chirurgicale en 1887, Revue des Travaux Français et Etrangers. Publiée sous la Direction du Dr. Paul Rodet. 1888. pp. 394.

CHAFFEY BROTHERS, Limited, 35, Queen Victoria-street, London.

The Australian Irrigation Colonies on the River Murray, in Victoria and South Australia. By Chaffey Brothers. Illustrated, price 3*s.* 6*d.*

CHURCHILL, J. & A., New Burlington-street, London.

Headaches, their Nature, Causes, and Treatment. By W. H. Day, M.D. Fourth Edition. 1888. pp. 443.

Landmarks, Medical and Surgical. By Luther Holden. Fourth Edition. 1888. pp. 79.

On the Preventive Treatment of Calculous Disease, and the use of Solvent Remedies. By Sir Henry Thompson, F.R.C.S., M.B. Lond. Third Edition. 1888. pp. 87.

On the Relief of Excessive and Dangerous Tympanites by puncture of the Abdomen. A Memoir. By John W. Ogle, M.A., M.D. Oxon., F.S.A. 1888. pp. 111.

A Manual of Nitrous Oxide Anæsthesia, for the use of Students and General Practitioners. By J. F. W. Silk, M.D., &c. 1888. pp. 120.

The Principles and Practice of Medicine. Edited and compiled from the manuscript of the late C. H. Fagge, M.D., F.R.C.P. By Philip Henry Pye-Smith, M.D., F.R.S. Second Edition. Vols. I. and II. 1888. pp. 1034 and 1103.

The Diagnosis and Treatment of Diseases of the Rectum. By W. Allingham. Edited and revised, with numerous diagrams, by H. W. Allingham. Fifth Edition. 1888. pp. 366.

An Atlas of the Pathological Anatomy of the Lungs. By the late Wilson Fox, M.D., F.R.S. 1888. pp. 286.

DOIN, OCTAVE, Paris.

Considérations Cliniques sur le Traitement du Catarrhe Chronique des Fosses Nasales. Par le Docteur L. Lacoarret. 1888. pp. 151.

FANNIN & CO., Dublin, and BAILLIÈRE, TINDALL, & COX, London.

Hydrocele and its Treatment. By J. S. M'Ardle, F.R.C.S. Dublin. 1888. pp. 35.

HUMMEL, A. L., South Sixteenth-street, Philadelphia.

Comparative Studies of Mammalian Blood, with special reference to the Microscopical Diagnosis of Blood-stains in Criminal Cases. By H. F. Formad, B.M., M.D. With 16 Illustrations from photo-micrographs and drawings. 1888. pp. 60.

JOHNSON, T. G., Fleet-street, London.

The Bacon Shakspere Question. By C. Stopes. 1888. pp. 149.

MACLEHOSE & SONS, Glasgow.

A System of Midwifery, including the Diseases of Pregnancy and the Puerperal State. By W. Leishman, M.D. Vols. I. and II. Fourth Edition. 1888. pp. 863.

OLIVER & BOYD, Edinburgh.

Notes on Surgery for Nurses. By Joseph Bell, M.D., F.R.C.S. Ed. Second Edition, revised and enlarged. 1888. pp. 153. Price 2*s.* 6*d.*

SOLER, ALVAREZ, & CO., Havana.

A Contribution to the Normal and Pathological Anatomy of the Vocal Bands. By Dr. C. M. Desvernine (Havana). With Plates. 1888. pp. 20.

SWAN SONNENSCHEIN & CO., Paternoster-square, London.

Another World; or, the Fourth Dimension. By A. T. Schofield, M.D. 1888. pp. 92.

TEODORO, ENRIQUE, Madrid.
La Higiene de los Organos Vocales. Por Sir Morell Mackenzie, M.D. Traducido de la Quinta Edicion, por Dr. Ramon de la Sota y Lastra. 1888. pp. 175.

THE INSURANCE TIMES OFFICE, Broadway, New York.
Brief Memoir of Stephen English. By P. Tertius Kempson, M.D. 1888. pp. 32.

THE TRICHOLOGICAL ACADEMY, 42, Marina, St. Leonards-on-Sea.
Handbook on Hair and Scalp Diseases, causing Baldness and Greyness. By G. H. Wheeler. For Students and Practitioners. Second Edition. 1888. pp. 211.

TRÜBNER & CO., Ludgate-hill, London.
A Dialogue against the Fever Pestilence. By William Bullein. Early English Text Society; extra Series, 52. Part I. 1888. pp. 145, price 10*s*.
The Anatomie of the Bodie of Man. By Thos. Vicary. With a Life of Vicary, Notes on Surgeons in England, Bartholomew's Hospital, &c.; an Appendix of Documents and Illustrations. Edited by F. J. Furnivall, M.A., Hon. Dr. Phil., and Percy Furnivall. Early English Text Society; extra Series, 53. Part I. 1888. pp. 336, price 15*s*.
The Science and Art of Training. A Handbook for Athletes. By H. Hoole, M.D. Lond. 1888. pp. 124.

VOSS, LEOPOLD, Hamburg and Leipzig.
Die Geschichte der Tuberkulose. Von Dr. Med. August Predöhl. 1888. pp. 502.

WERTHEIMER, LEA, & CO., Circus-place, London-wall, E.C.
Penological and Preventive Principles, with special reference to Europe and America. By W. Tallack, Secretary of the Howard Association, London. 1889. pp. 414, price 8*s*.

The Chemical Actions of some Micro-Organisms; by Robert Warington (Harrison and Sons, St. Martin's-lane, London, 1888).—Thérapeutique: des Principes constitutifs de la Méthode Dosimétrique; par le Docteur Biéchy (Ch. Chanteaud and Cie., Paris, 1888).—The District Railway Guide to London, with coloured maps, plans, diagrams, &c. (Alfred Boot and Son, Old Bailey, London, 1888, price 6*d*).—Index Medicus: Authors and Subjects, vol. x., No. 7, July, 1888 (Trübner and Co., and Lewis).—Ueber den Bauchschnitt bei der Behandlung von intraperitonealen Verletzungen; von Sir W. Mac Cormac, F.R.C.S.; Jahresrede in der Medicinischen Gesellschaft zu London am 2 Mai, 1887; Uebersetzt von Dr. Oscar Thamhayn in Halle a. S.—Practical Hints on Gas Consumption; by Joseph Shaw (J. Broadbent and Co., Newstreet, Huddersfield, 1888), price 2*d*.—The Reign of Law in Medicine; by J. B. Pike, L.R.C.P., M.R.C.S. (J. W. Topping, Loughborough, 1888), price 6*d*.—L'Hystérie Pulmonaire; par Dr. Léon-Petit (O. Doin, Paris, 1888).—Ensaio Critico sobre o diagnostico Etiologico da Ischuria Prostatica; por A. M. Da Cunha (Nova Goa, 1887).—Pathogénie et Traitement de la Kérato-Conjunctivite phlycténulaire (Ophthalmie des Scrofuleux); par le Dr. V. Augagneur (Imprimerie Vitte et Perrussel, 30, Rue Condé, Lyon, 1888).—Magazines for September: Leisure Hour, Good Words, Sunday at Home, Scribner's Magazine, Boys' Own Paper, Sunday Magazine (Isbister); Girls' Own Paper (Religious Tract Society).—Mind and Matter: a Sermon preached before the British Medical Association; by J. Caird, D.D., LL.D. (J. Maclehose and Sons, Glasgow, 1888).—Ideation: Synopsis accepted by the Royal Belgian Society, 1887.—A New Philosophy; by J. Barker Smith, Surgeon (Trübner and Co., London), price 2*s*. 6*d*.—On Infant Feeding and the value of preparations of pure Alpine Milk; by Dr. Nachtigal (M. Ridgway, 169, Piccadilly, London, 1888).

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BEAUMONT, W. M., M.R.C.S., has been appointed Surgeon to the Bath Eye Infirmary, vice F. Mason, deceased.

BLACKER, A. B., M.B., B.S. Durh., L.R.C.P., M.R.C.S., L.S.A., has been appointed Clinical Assistant in the Special Department for Diseases of the Ear at St. Thomas's Hospital.

BRIGHT, E. F., M.D. Lond., M.R.C.S., has been appointed Senior Assistant Medical Superintendent of the Infirmary of the Parish of St. Pancras, London.

BRISTOWE, H. C., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Departments for Diseases of the Skin at St. Thomas's Hospital.

BROOK, W. F., M.R.C.S., L.S.A., has been appointed House Surgeon to St. Thomas's Hospital.

CALVERT, J. T., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

COOK, S. B., L.R.C.P., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

COOKE, C. W., L.R.C.P., M.R.C.S., has been appointed Resident House Physician to St. Thomas's Hospital.

ECCLES, C. H., L.R.C.P., M.R.C.S., has been appointed Non-Resident House Physician to St. Thomas's Hospital.

EDWARDS, J. ELLIS, M.R.C.S., L.S.A., has been appointed Medical and Vaccination Officer for the District of Conwil, Carmarthen.

EDWARDS, PERCY, L.R.C.P. Lond., M.R.C.S., L.S.A., has been appointed Resident Medical Officer of the Hospital at Lodge Moor, Sheffield.

FAWSSETT, F., L.R.C.P., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

FOTHERGILL, T. P., M.D. Edin., M.R.C.S., M.B., has been appointed Medical Officer of the Bedale Southern District, Bedale Union.

GARRETT, JOHN HY., M.D., B.S., L.S. Sc., Univ. Durh., has been appointed Resident Medical Officer to the City of Liverpool Southern Hospital for Infectious Diseases.

GROOM, HARRY, B.A., M.B. Camb., M.R.C.S., L.S.A., has been appointed Medical Officer of Health for the Wisbech Urban Sanitary District, vice Mason, resigned.

HARRISON, C., M.R.C.S., L.S.A., has been appointed Medical Officer of the Keynsham Districts, and the Workhouse, of Keynsham Union.

HOBHOUSE, E., M.A., M.B., B.S. Oxon., M.R.C.S., has been appointed Assistant House Surgeon to St. Thomas's Hospital.

HORSFALL, THOMAS, M.R.C.S., L.S.A., has been appointed Medical Officer of the Bedale Northern District, Bedale Union.

HUGHES, S., M.B. Edin., M.R.C.S., L.S.A., has been appointed Resident Medical Officer of the City Hospital, Grafton-street, Liverpool.

JAMES, C. H., L.R.C.P., M.R.C.S., has been appointed Resident Accoucheur to St. Thomas's Hospital.

JONES, V. L. W., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for the Sub-district of St. Clears, Carmarthen Union.

KEILLER, WILLIAM, L.R.C.P., L.R.C.S. Ed., L.F. and S.G., has been appointed Assistant Medical Officer to the Edinburgh Provident Dispensary, vice A. A. Matheson, M.D., resigned.

KER, JAMES, M.A., M.B., B.C., D.P.H. (Cantab), has been appointed Resident Medical Officer to the Swansea General Hospital, vice R. Nelson Jones, resigned.

KERSHAW, E. E., M.R.C.S., L.R.C.P. Lond., has been appointed House Physician to the Middlesex Hospital.

LEWIS, B. A., L.R.C.P. Lond., has been appointed Medical Officer of the Sub-district of Mydrim, Carmarthen Union.

LIGHT, E. M., M.A., M.B., B.C. Cantab., L.R.C.P., has been appointed Clinical Assistant in the Special Department for Diseases of the Throat at St. Thomas's Hospital.

LIVEING, ROBERT, M.D., M.B., M.A. Camb., F.R.C.P. Lond., has been appointed Consulting Physician for Skin Diseases at the Middlesex Hospital.

LUARD, H. B., M.B., B.C. Cantab., L.R.C.P., M.R.C.S., has been reappointed Resident House Physician to St. Thomas's Hospital.

MACRITCHIE, D., M.B. Aberd. and C.M., L.R.C.S., L.M. Edin., has been appointed Medical Officer for the Huntingdon District, Huntingdon Union.

MARSH, J. H., L.R.C.P., L.R.C.S. Edin., L.M., has been appointed Medical Officer of the Workhouse, Bolton Union.

MATHESON, A. A., M.D., M.R.C.P. Ed., has been appointed Medical Officer to the Edinburgh Provident Dispensary.

MCCREERY, J. O., L.R.C.S.I., L.M., has been appointed Medical Officer of the Debenham District of the Bosmere and Clayton Union.

ORD, W. W., M.A., M.B., B.Ch. Oxon., M.R.C.S., has been appointed House Surgeon to St. Thomas's Hospital.

PARTRIDGE, SAMUEL, M.R.C.S., L.S.A., has been reappointed Medical Officer of Health, Darlaston, Staffordshire.

PEARSON, JOSEPH, M.B. and C.M. Aberd., has been appointed Resident Medical Officer for the Winter-street Hospital, Sheffield.

RICHARDSON, J. N., M.B. Durh., M.R.C.S., has been appointed Medical Officer for the Marsden District, Huddersfield Union, vice McClintock, resigned.

ROBSON, JAS. M., B.A., M.B. Durh., has been appointed Medical Officer of the Tynemouth District, Tynemouth Union.

SANSOM, H. A., L.R.C.P., M.R.C.S., has been reappointed Clinical Assistant in the Special Departments for Diseases of the Skin at St. Thomas's Hospital.

SEDDON, H. B., L.R.C.P., M.R.C.S., has been appointed Assistant House Physician to St. Thomas's Hospital.

SHARP, EDWD., M.R.C.S., L.S.A., has been reappointed Medical Officer of Health, Truro Union District.

SMITH, J. W. T., M.D. Qu. Univ. Irel., has been appointed Physician to the Belfast Royal Hospital.

WHEELER, T. K., M.D. Qu. Univ. Irel., L.M., M.Ch., has been appointed Surgeon to the Belfast Royal Hospital.

Vacancies.

In compliance with the desire of numerous subscribers, it has been decided to resume the publication under this head of brief particulars of the various Vacancies which are announced in our advertising columns. For further information regarding each vacancy reference should be made to the advertisement.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's-inn-road.—Three Clinical Assistants.

COUNTY ASYLUM, Shrewsbury.—Junior Assistant Medical Officer. Salary £100 per annum, and £8 in lieu of beer, with board, lodging, and washing.

COURT FORESTERS, AND SOCIETIES, 18, York-street, West Cowes, Isle of Wight.—Medical practitioners to attend sick members of the above Societies.

FULHAM UNION.—Assistant Medical Superintendent. Salary £100 per annum, with board, furnished apartments, attendance, and washing at the Infirmary.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway-road, N.—House Physician. Salary £50 per annum, with board and lodgings in the Hospital. Physician to Out-patients.

NEWCASTLE-ON-TYNE DISPENSARY.—Visiting Medical Assistant. Salary £120 per annum.

NORTH SHIELDS AND TYNEMOUTH DISPENSARY.—House Surgeon and Dispenser. Salary £130 per annum, with a furnished house, gas, coals, &c.

NORWICH FRIENDLY SOCIETIES' MEDICAL INSTITUTE.—Resident Medical Officer. Salary £220 per annum, to increase £10 per annum, for three years. Accouchement fee extra, 10*s*. 6*d*. each case (paid by patient).

NOTTINGHAM FRIENDLY SOCIETIES' INSTITUTION.—Resident Medical Officer. Salary £200 per annum, with residence; coal, gas, and rates and taxes (except income tax) will be paid by the Institution.

PARISH OF LAMBETH.—Assistant Medical Officer and Dispenser. Salary £125 per annum, with board, apartments, and washing. No alcoholic liquor allowed, but in lieu thereof an additional payment of £6 per year will be made.

ROYAL HOSPITAL FOR CHILDREN AND WOMEN, Waterloo Bridge-road, S.E.—Resident Medical Officer. Salary £70 per annum, with board, residence and laundry.

ROYAL INFIRMARY, Hull.—House Surgeon. Salary 100 guineas per annum, with board and furnished apartments.

ROYAL UNITED HOSPITAL, Bath.—House Surgeon. Salary £60 per annum, with board and lodging.

ST. MARYLEBONE GENERAL DISPENSARY, 77, Welbeck-st., Cavendish-square.—Resident Medical Officer. Salary £105 per annum, with furnished apartments, attendance, coals, and gas.

WESTMINSTER GENERAL DISPENSARY, 9, Gerrard-street, Soho.—House Surgeon. Salary £100 per annum, with apartments; no board.

WESTMINSTER HOSPITAL, Broad Sanctuary, S.W.—Assistant Physician. Administrator of Anæsthetics.

Births, Marriages, and Deaths.

BIRTHS.

BUSH.—On the 31st ult., at Lansdown-place, Clifton, the wife of J. Paul Bush, M.R.C.S., of a daughter.

DREW.—On the 1st inst., at Saville House, Buntingford, Hertfordshire, the wife of J. Bowerman Drew, L.R.C.P.S. and L.M.Edin., of a son.

GREENHILL.—On the 6th inst., at Warwick House, Stoke Newington, the wife of Edward Fowler Greenhill, M.R.C.S., L.R.C.P., of Russell-street, Calcutta, of a daughter.

LANG.—On the 3rd inst., at Corowa, New South Wales, the wife of W. H. Lang, M.D., of a son.

MACGEAGH.—On the 2nd inst., at St. Leonards-on-Sea, the wife of T. E. Foster Macgeagh, M.D., of twin daughters, one stillborn.

REYNOLDS.—On the 29th ult., at Stamford-hill, N., the wife of W. Percy Reynolds, L.R.C.P.Lond., M.R.C.S., of a daughter.

ROPER.—On the 29th ult., at Shepperton-on-Thames, the wife of Edwin Roper, F.R.C.S., of a daughter.

MARRIAGES.

DANCY—BINNEY.—On the 30th ult., at Christ Church, Lee, Kent, Horace M. Dancy, L.R.C.P., of Southwell, Notts, to Ada Jane, only daughter of the late John Septimus Binney.

EWART—MULLER.—On the 1st inst., at St. Mary's, Swilland, Suffolk, by the Rev. J. D. Brown, Rector of Witnesham, assisted by the Rev. J. Wickham, Rector of Swilland, Charles Ewart, M.D., L.R.C.P., M.R.C.S. Eng., of 58, Queen's-gate-terrace South Kensington, S.W., to Maud Muller, daughter of Wm. Muller, Esq., of 17, Prince's-square, W.

MONTFORD—YEEND.—On the 29th ult., at the Parish Church, Upton-on-Severn, by the Rev. Canon Lawson, M.A., assisted by the Rev. F. H. Rattliff, M.A., James Montford, M.R.C.S., L.R.C.P., Upton-on-Severn, to Adeline Marion, only surviving child of W. G. Yeend and granddaughter of Richard Guilding, Capital and Counties Bank, Upton-on-Severn.

RAKE—SHANNON.—On the 30th ult., at Beasbrook, Ireland, by special licence, Herbert Vaughan, L.S.A. and M.R.C.S.Eng., fourth son of Beaven Rake, L.S.A. and M.R.C.S.Eng., of Fordingbridge, Hants, to Louisa, youngest daughter of Thomas Shannon, of Newry, Ireland.

READ—LAWFORD.—On the 31st ult., at Wandsworth, by the Rev. W. G. Tarrant B.A., Mabyn Read, M.D. Cantab., of 63, Battersea Rise, to Isabel Margaret, daughter of George Lawford, Esq., of Sherbrooke Lodge, Nightingale-lane, Balham.

REEVES—SMITH.—On the 5th inst., at Christ Church, Turnham-green, John Kingham Reeves, B.A., M.R.C.S., L.R.C.P., eldest son of the late John Kingham Reeves, of West Hendred, to Eleanor Charlotte, youngest daughter of the late Jas. Fletcher Smith, of Gunnersbury.

RUMBOLL—CROSS.—On the 4th inst., at St. Bartholomew's-the-Less within the Hospital of St. Bartholomew, by the Rev. F. H. Beaven, Vicar of St. Paul's, Burton-on-Trent, assisted by the Rev. W. Ostle, Vicar of the Parish and Hospitaller, and the Rev. H. Tanner King, of St. Thomas's, Winchester, cousin of the bridegroom, Charles Frederic Rumboll, M.D., B.S., of Lowbourne House, Melksham, to Edith, second daughter of William Henry Cross, of St. Bartholomew's Hospital and of the Inner Temple, Barrister-at-Law.

STIELL—FLETCHER.—On the 29th ult., at All Saints' Church, Scarborough, Gavin Stiell, M.B., C.M.Edin., of Elm's-road, Clapham-common, to Barbara Mary, youngest daughter of William Fletcher, Stamford Villa, New Parks-crescent, Scarborough.

TRAVELL—REDFERN.—On the 6th inst., at St. Matthew's, Nottingham, by the Rev. T. B. B. Ferris, M.A., John William Travell, M.B., to Annie, only daughter of H. Redfern, The Park, Nottingham.

DEATHS.

BELL.—On the 11th inst., at the residence of his brother-in-law, Tregunter-road, South Kensington, the Rev. David Bell, M.D. Glas., for thirty-three years Vicar of Goole, Yorkshire, aged 80.

FURNIVALL.—On the 5th inst., at 5, Victoria Terrace, Bridlington Quay, suddenly, Charles Henry Furnivall, M.R.C.S., of Lynton House, Springfield Park, Acton, W., aged 46.

SMITH.—On the 30th ult., at Axbridge, Somerset, George Smith, M.R.C.S.E., L.S.A.L., aged 62. (No cards.)

MASON.—On the 29th ult., at Belmont, Bath, Frederick Mason, M.R.C.S., L.R.C.P., in his 65th year.

RODEN.—On the 29th ult., at Llandudno, North Wales, Thomas Clarke Roden, M.D., in his 71st year.

N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, September 15th, 1888.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Sept. 7	30·04	N.W.	57	54	101	66	51	·05	Bright
,, 8	30·37	N.W.	54	54	99	60	50	·04	Cloudy
,, 9	30·21	N.E.	56	52	101	61	47	..	Cloudy
,, 10	30·11	S.W.	53	51	89	61	49	..	Foggy
,, 11	30·29	W.	53	50	106	67	46	·14	Bright
,, 12	30·48	W.	52	50	102	69	46	..	Foggy
,, 13	30·51	N.E.	53	51	105	67	49	..	Hazy

Notes, Short Comments, & Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

All communications relating to the editorial business of the journal must be addressed "To the Editors."

Lectures, original articles, and reports should be written on one side only of the paper.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed to the Sub-Editor.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "to the Publisher."*

We cannot undertake to return MSS. not used.

"A SERIOUS QUESTION."

WE reproduce the following paragraph from the pages of *Mr. Punch*, who, on occasion, can be serious with unquestionable effect. The suggestion is one which it is most desirable should be taken to heart by the whole community. The question is very serious indeed.

> "Is it not within the bounds of probability that to the highly-coloured pictorial advertisements to be seen on almost all the hoardings in London, vividly representing sensational scenes of murder, exhibited as 'the great attractions' of certain dramas, the public may be to a certain extent indebted for the horrible crimes in Whitechapel? We say it most seriously. Imagine the effect of these gigantic pictures of violence and assassination by knife and pistol on the morbid imagination of unbalanced minds. These hideous picture-posters are a blot on our civilisation, and a disgrace to the drama."

Mr. J. Exley, M.R.C.S.—Antifebrin (acetanilide) is insoluble in cold water, but freely soluble in alcohol. It is therefore generally prescribed with sp. vin. rect., and the rather pungent taste disguised by extract of liquorice. The dose is from two to ten grains.

T. K. F. S.—The questions had better be addressed to a respectable agent.

"AMBULANCES."

To the Editors of THE LANCET.

SIRS,—In an article in this week's LANCET you state that the police ambulance "is available for use under certain conditions in cases of illness, always in the event of accident." My experience has been different from this. Recently I was called in by the police to attend a woman who had fractured her spine by throwing herself out of window. I found her on the bed, and thought she had better remain where she was for the present. Three or four days later, the friends pressed me strongly to sanction her removal to a hospital, and, indeed, this, if possible, was highly desirable. They arranged for a bed, and then, at my suggestion and hearing my statement of the case, applied at the police station for the loan of an ambulance. The official in charge agreed at once, and sent a man down to arrange with me; and it was agreed that all expense should be defrayed. At the last moment, a superior official countermanded the whole affair, and left us only the possibility of a greengrocer's cart to make sure of getting the patient into the hospital. With the help of a plaster jacket, applied the day before, she was at length transferred thither safely, though at how great a risk you know as well as I.

"Scotland-yard" may, perhaps, be reached through the medium of THE LANCET, and thus this note may do good.

I am, Sirs, yours faithfully,

Queen's-crescent, N.W., Sept. 1st, 1888. F. R. HUMPHREYS.

THE STUDENTS' NUMBER: CORRECTIONS.

THE name of Dr. A. H. N. Lewers, as Assistant Obstetric Physician to the London Hospital, was inadvertently omitted from the table on p. 483 in our last issue.—In the paragraph headed "Norfolk and Norwich Hospital," p. 496, the order in which the medical and surgical staff was placed, and the statement of fees, require correction as follows:—For the Physician's Practice for three months, £5 5s.; perpetual, £10 10s. Physicians: Dr. Bateman, Dr. Taylor, and Dr. Barton. Surgeons: Mr. Cadge, Mr. Williams, and Dr. Beverley. Assistant Surgeons: Mr. Robinson and Mr. Burton.

L.S.A.—We are not aware, but think it probable, that the same regulations are in vogue in the Islands as govern the practice of foreign medical men in the mother country.

Dr. Courtney Nedwill.—The advertisement enclosed by our correspondent is of a most objectionable character.

Mr. B. Adams Lewis.—Grossmith, 175, Fleet-street, E.C.

"MEDICAL PRACTICE IN AUSTRALIA."

To the Editors of THE LANCET.

SIRS,—The following short *résumé* of a voyage out to the Antipodes by sailing ship, made by myself five years ago, may be of some interest to your correspondent "Poylact."

I left London in November, and in consequence of a south-west gale was detained five days at the Nore. A fortnight elapsed before we got down to the latitude of Madeira, and during the whole of this time the cold was intense. There was no fire in the saloon, so the passengers naturally felt it keenly. The doors and ventilators were kept carefully closed, so in a few days the atmosphere, contaminated by the products of respiration and the combustion of the paraffin lamps, became perfectly stifling, and we were driven out into the bitter cold weather on deck to avoid suffocation. After passing Madeira we had splendid weather until we reached the Cape, when our troubles began again. We were a week among the ice, although in an exceptionally high latitude for it to be met with, and for another month our course took us through such cold stormy weather, as can only be found in low southern latitudes. Strong westerly gales, snow, and rain were constant, and only varied in severity; so here again the absence of heating apparatus in the saloon was acutely felt; and this is an almost constant defect in all sailing ships going to the Antipodes. The food, however, was good throughout.

In contrast with this experience, I may say that I returned by steamer round the Horn; and although the cold on deck was intense, yet in the saloon heated by steam everything was bright and cheerful in the extreme.

As a result of my own experience, I would strongly advise "Poylact" to go by some of the magnificent steamers, such as those of the Orient, P. and O., or Messageries Maritimes companies. The fares are a good deal heavier than by sailing ship, but the comfort is also greater in proportion, and as the track lies through warmer latitudes there is comparatively little cold weather. The only drawback is the excessive heat in summer in the Red Sea. I am, Sirs, your obedient servant,

Sept. 2nd, 1888. VIATOR.

To the Editors of THE LANCET.

SIRS,—The following answers to the questions of "Poylact" in your last issue will be found near the truth.

The most suitable parts of Australia for phthisis are inland. On the eastern side of Australia, all that country between the coast range and the coast is more or less unsuitable. Tasmania enjoys some reputation for this disease or its cure. Of the Australian colonies: In Victoria, the Murray district; in New South Wales the Darling River districts and the Blue mountains are recommended; while in Queensland patients are sent from all parts to Warwick, which is about 150 miles west of Brisbane; and I have heard of improvement in patients sent to Roma, Dalby, and even Charters Towers, which is further north. In Queensland at least it is very important to avoid the coast, and especially so in summer. Board and residence can be had at the townships I have mentioned at moderate rates, but at the stations (cattle or sheep) this is not usual. Voyage by sailing vessel has no advantage over the magnificent steamers now running in fast time to all ports. Saloon fare is about £70. Peninsular and Oriental, Orient, and Messageries lines are the best. The best way to go about settling in Australia is upon arrival to take a billet, and there are plenty to be had, travelling for an insurance company. In this way some months can be spent in learning the ways of the people, and opportunity is afforded of seeing the various towns and districts prior to starting practice.

I enclose my card and address, and shall be happy to answer any further questions your correspondent may put.—Yours faithfully,

Sept. 8th, 1888. AUSTRALIA.

TOUTING FOR PRACTICE.

M.D. complains of a handbill circulated freely among his patients advertising terms of attendance under a provident dispensary arrangement worked by an individual practitioner. Gentlemen should know that they do not escape the charge of acting unprofessionally when they send advertisements to the patients of other medical men by heading their bill "Provident Dispensary."

Mr. G. Hamilton-Gordon.—We would recommend our correspondent to make application to the Medical Officer of the Local Government Board, Whitehall

"WHAT IS THE CAUSE OF CANCEROUS INFECTIVITY?"

IN connexion with the paper on this subject recently contributed to our columns by Dr. Jas. Braithwaite, its author forwards us a letter from Mr. Richmond R. Allen, L.R.C.P.Ed., of Pietermaritzburg, who states therein as follows:—"I have, owing to the frequency of cancer here, given some little attention to the subject, and I have come to the conclusion that excess of animal food is in some way responsible for the development of cancer; and for the following reasons:—1. In this colony cancer is a very common disease among Europeans, but not among natives. 2. Europeans consume food, mainly meat, three times a day, with little or no vegetables. 3. Sedentary habits, with excess of animal food and consequent excess of phosphates over and above the requirements of nature, is the usual history obtained from persons affected with cancer hue. 4. Natives—who are vegetarians—do not to my knowledge suffer from cancer, although there is a remarkable deficiency of lime salts from water."

A. B.—Skinner's chloroform inhaler will answer the purpose. It is a framework of wire, shaped like a scoop net and covered with flannel; the mixture is dropped on the flannel. Another simple contrivance can be made out of a piece of spongio-piline, twisted into a cone shape and fastened so with strapping; the mixture can be dropped upon a piece of sponge in the cone. The apex of the cone should be left patent.

THE PROTECTION OF THE PROFESSION.

To the Editors of THE LANCET.

SIRS,—I noticed in your issue of Sept. 1st a very sensible letter, suggesting that the Council and Corporations would do much better by occupying themselves somewhat with the practical good of the profession, instead of wasting their time in arguing in a vicious circle about preliminary education. The abuse of medical charity and the provident system will, if allowed to go on unchecked, soon render the medical profession one only to be entered by those with good private means, or those who intend to devote themselves to public appointments. Private practice amongst the upper artisan and lower middle classes is becoming a vanishing point. This is just the class of practice which has supported the majority of medical men. The medical press, like the Council, does not seem inclined to make this a burning question. Pressure must be brought to bear upon public feeling, and on the constituted authorities of the profession, by the combination of general practitioners. I beg to suggest that all medical men who feel the evil of this unfair and degrading competition—all who see their well-to-do patients going to hospitals for advice or operation, all who feel the serious loss entailed by the abuse of clubs and provident institutions—shall band themselves together, and organise themselves into an association (or, if we wish to be in fashion, a league) for the protection of the profession and the regulation of these matters, in conformity with a due regard to real charity and the true interests of the general public.

I am, Sirs, your obedient servant,

Loughboro', Sept. 3rd, 1888. J. B. PIKE.

*** Our correspondent does not clearly indicate the right of the Medical Council and the examining bodies to deal with the questions which he mentions. The Medical Council would certainly soon be reminded that it had certain statutory duties to perform, and must mind its own business. All the same, the influence of the Medical Council has, as a matter of fact, been in the direction of limiting the numbers of the profession by constantly raising the standard of education, and so excluding many. That the medical press is indifferent to the evils caused by excessive numbers and by abuses of medical charity we decidedly deny—at any rate, for ourselves.—ED. L.

UNQUALIFIED ASSISTANTS AND BRANCH PRACTICES.

Rectus asks, "Is a medical man justified in keeping an unqualified assistant at a distance of four miles, provided the medical man visits the place three times a week, or oftener if necessary, and the inhabitants understand the assistant to be *sine* qualification, and still wish his services to be retained?" "Rectus" does well to put the question. The arrangement would be unjustifiable, and would render the principal liable to censure by the Medical Council.

Spartan.—It is not possible to lay down specific fees for every district. Our correspondent will do well to let his charges in this case correspond pretty closely with his usual rate of charge for patients in similar circumstances.

Dr. Groom (Wisbech).—If possible, next week.

TWINS.

To the Editors of THE LANCET.

SIRS,—On Aug. 12th, I delivered Mrs. T——, aged twenty, a primipara, of twins, boys. Mrs. T—— was a twin herself. On inquiring from her mother, I learnt that Mrs. T——'s father's brother's wife had had twins. There is no anterior history of twins so far as I could make out on the woman's side; or, in fact, as the mother very lucidly put it, it was a descent of twins on the male side. I do not know if this idea is new to you; as it was very strange to me, I thought I would trouble you with the fact. I am, Sirs, yours truly,

Sittingbourne, Sept. 3rd, 1888. T. SOMERVILLE SMITH, M.D.

THE ABUSE OF HOSPITALS.

Mr. Kesteven will scarcely expect us to find room for his letter. We cannot concede to him any monopoly as respects the justness of his views on hospital abuse, or on the means by which it is to be remedied. Our views of hospitals are very pronounced and explicit. We regard them as an indispensable boon to the poor, and, as a means of medical education, an inexpressible advantage to the rich. But they are largely abused, and it is our earnest and constant endeavour to reduce these abuses to a minimum in the interest alike of hospitals, of those who might be pauperised by hospital relief, and of the medical profession, which is injured by the indiscriminate admission of unfit cases.

An Enquirer.—After Jan. 1st, 1892, no one can be appointed to a district or districts having a population of 50,000 or more unless holding a diploma in sanitary science or employed during three continuous years in regard to a population of not less than 20,000. Our correspondent would not therefore be eligible for appointment, and unless previously to that date appointed for life, would have to vacate his office at the termination of the time for which he was appointed.

HOSPITAL FOR OUR FALLEN.

To the Editors of THE LANCET.

SIRS,—I much regret the closing of our lock hospitals. I think those who advocated their being closed scarcely realised the sad results. Hundreds of our poor fallen sisters are dying outside for want of proper medical care, and why should not this special form of suffering receive the same attention as any other disease, whatever the origin of it may be? Our homes are now being filled with women incapable of performing their work. Our funds suffer, and the cure of these poor women becomes an additional strain on our penitentiary workers. If some benevolent persons would start some small hospitals like St. Agnes, Margaret-street, it would be a great boon. Each Diocesan Penitentiary ought to have its Hospital, as well as its Refuge, working in connexion with it. I cannot agree with the argument of those who say we encourage sin because, when they leave the hospitals cured, they return again to their bad life. This does not often happen where they receive kind treatment and good influences at work besides, and those who appear hopeless may have received some help which may comfort them in their last hours. May those who have the power and the means have their hearts opened to do something towards helping in this good work, for I am sure they will reap a rich reward—for what work can be more Christ-like than helping our poor fallen sisters?

I am, Sirs, yours faithfully,

Penarth, Sept., 1888. A PENITENTIARY WORKER.

A HINT.

WE receive now and again complaints of which the following is a sample:—"I, through THE LANCET, answered an advertisement for an assistant, and enclosed my photo, with a request that it might be returned. Not receiving it, I wrote, enclosing a stamp for its return, but have waited in vain. As this is the fourth photo of mine that has been retained, I think I am justified in feeling aggrieved, and would be glad of your help in exposing the wrong done to me." The matter seems trivial enough, but the neglect of common courtesy in the matter referred to on the part of those guilty of it may, it can easily be understood, sometimes be productive of serious inconvenience, and, if occurring frequently to the same individual, involve unnecessary expense. This hint should be amply sufficient to ensure the non-repetition of such a breach of good manners.

Dr. Davison (Buenos Ayres).—Although statements have been made, and reports have been written, condemnatory of sewer systems, we are not aware that any such condemnation can be regarded as in any way authoritative. It is perfectly true that there have been cases where the adoption of a system of sewers has been followed by an increase of preventable disease; but this has been due to faulty sewers and ill-constructed house drains, whereas the reverse is known to have been the general result where the works have been properly carried out. Sewers which admit of soakage from them, of stagnation of contents, and other evils are distinctly a source of danger; but such as are properly constructed and efficiently ventilated are not so, unless, indeed, faults attaching to house drains lead to nuisance in the sewers. House drains are, as a matter of fact, more responsible for the mischief with which sewers are credited than any other part of the water-carriage system; but if constructed on the principles laid down and illustrated in Knight's Annotated Edition of the Model Bye-laws of the Local Government Board, such dangers may be effectually avoided, whilst general improvement as regards healthiness results. As to the pail system, it must be remembered that it in no way avoids the necessity for sewers. In towns and cities the inhabitants receive an average of some fifteen to twenty gallons of water per head per day, and this water, more or less polluted, has to be conveyed away. The pail system only removes from that water the more solid excreta.

M.A. should apply to the British Consul, Berlin.

THE BEAUMONT TEAPOT.

IN our notice of this useful invention in our issue of the 4th ult. we inadvertently omitted to mention the address of the manufacturers. This, at the request of several correspondents, we now give—viz., Messrs. R. and W. Wilson and Sons, 90, Wardour-street, Soho, W. We may take this opportunity to remark that the same distinguishing feature—namely, the movable strainer—is also adapted to the vessel employed in making coffee.

Maoriland.—1. The scope of the Society is confined to London and its vicinity.—2. We know of no other institution of the kind limited to the profession.

OFFICIAL AMENITIES.

To the Editors of THE LANCET.

SIRS,—In THE LANCET of Sept. 1st there is to be found an advertisement for a senior assistant medical officer in a registered hospital for the insane. Now, I should see nothing remarkable about that advertisement if I were not aware that there is already on the staff an assistant medical officer who has been there since the place was opened, and who is referred to in the current annual report as one of the "valuable and specially selected officials" who have given aid in the developing of the institution so far. I do not know the assistant medical officer in question; I have never seen him, and have never directly or indirectly had any communication with him. But this I do know, that, after a severe and prolonged training in a county asylum, he took office under his present superintendent in another asylum, and followed him loyally to the one in which they both are now labouring. Surely the committee does not intend to place a stranger over a tried officer; and surely no man with a grain of hope for fair treatment in the future would lend himself to such a transaction. Though a medical superintendent of many years' standing, I write this with all the feelings of one who once was AN ASSISTANT MEDICAL OFFICER.

Sept. 5th, 1888.

UNITED HOSPITAL ATHLETICS.

WITH reference to our article on United Hospital Athletics in the issue of Sept. 8th, a correspondent writes to point out that the cup for the rifle competition which takes place yearly in the grounds of the National Rifle Association for the last five years—from 1884 to 1888—has been won by St. Thomas's Hospital, the members of which are naturally proud of their repeated successes.

B. Bromfield.—We do not give medical advice. All the questions put to us can be answered by the usual medical attendant.

A SENSATIONAL PATHOLOGICAL DEMONSTRATION.

To the Editors of THE LANCET.

SIRS,—My pathological feelings received a shock recently, on reading in a daily paper that hæmaturia had occurred from the throat of the late Emperor Frederick. But—O shade of Hunter!—how can the following incident, taken from a recent novel, be explained? Scene: a dissecting-room. Subject of demonstration: the brain of a man the victim of neuralgia. "The operator laid bare the brain. Every eye, bent, strained on it under the bad light, perceived it to have been, as it were, eaten away, consumed by a gnawing. .... The professor compressed his shaggy brows, and then, with one slice of the scalpel, laid open the globous mass. On the instant arose a cry, a hiss, a panting of bitter loathing, of horrible nausea. As the brain fell apart there crawled across the table, black from its rich battening, an enormous spider!" I pause for a reply, and have ordered a fresh work on zoology.

I am, Sirs, yours truly,

August, 1888. AMICUS.

COMMUNICATIONS not noticed in our present number will receive attention in our next.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Ward Cousins, Southsea; Dr. J. Braithwaite, Leeds; Surgeon-Major Gray, Killiney; Mr. T. P. Pick, London; Mr. Tubbs, London; Dr. Thin, London; Mr. R. Harrison, Liverpool; Dr. Scriven; Mr. Teichelman, Birmingham; Dr. Tooker, Blundellsands; Dr. Hayward, Liverpool; Dr. Easby, Peterborough; Mr. F. R. Conder; Prof. J. Jones, New Orleans; Dr. W. Robertson, Newcastle-on-Tyne; Messrs. Van Houten and Zoon; Dr. Lewers, London; Dr. Cremen, Cork; Messrs. Christy and Co., London; Mr. W. H. Kesteven, London; Dr. Davison, Buenos Ayres; Mr. Cookson, Halifax; Mr. B. Bromfield; Messrs. Berndes and Co., London; Mr. Phillimore, London; Dr. A. B. Judson, New York; Mr. J. de Z. Marshall, Hastings; Messrs. Brown, Gould, and Co., London; Mr. A. J. R. Foulerton, Chatham; Mr. Woolmer, Buenos Ayres; Mr. McBean, Newcastle-on-Tyne; Rev. J. M. Buckley, New York; Mr. Treasure, Cardiff; Dr. Stephenson, Aberdeen; Mr. W. J. Nicholls, St. Ives; Mr. Morton, London; Mr. Parker, Cork; Dr. J. Shaw, Sheerness; Mr. J. C. Balfour, Redbourne; Dr. C. J. Lambkin, Lagos; Dr. Pittock, Margate; Dr. Churton, Leeds; Dr. T. S. Smith, Sittingbourne; Dr. Lowe, Southport; Dr. D. G. Evans; Dr. Parnewan, Liverpool; Mr. W. I. Addison, Glasgow; Mr. R. B. Sellers, Rochdale; Mr. Peake, London; Dr. J. E. Squire, London; Dr. Gourley, Hartlepool; Mr. Pike, Loughborough; Dr. Scatliff, Margate; Dr. M'Mordie, Belfast; Mr. G. H. Gordon, London; Mr. Menda, London; Dr. Bell Taylor, Nottingham; Mr. J. H. Drake, Ufculme; Mr. Humphreys, London; Mr. Ellison, Castleton; Mr. Oswald, London; Mr. Logan,

Newcastle; Mr. Hay, Salford; Mr. F. R. Greenwood, Leyton; Dr. J. Phillips, London; Mr. Johnson, Shrewsbury; Lady F. Trevanion, London; Mr. Martin, Glasgow; Mr. Ormond, Bath; Dr. N. E. Davies Sherborne; Mr. Bryden, Yorks; Dr. Wise, Maloja; Dr. F. C. Taylor, Dorking; Mr. Essex; Dr. Downie, Glasgow; Mr. E. C. Bousfield, London; Dr. Langschmidt, Bredasdorp; Mr. N. Mayne, Longford; Axilla; Australia; X. Y. Z.; Diabetes; Rectus; Borough Fever Hospital, Leeds; Alpha, Glasgow; M.D.; Maoriland; A Penitentiary Worker; F. N.; J. D., M.B. &c.; Solicitatio; A. B. P.; An Assistant Medical Officer; M.D., Helmsley; Tropic, Birmingham; A Margate Surgeon; T., London; D. R. A., London; Iago, London; Bradford Infirmary; Z. Y., London; A. P., London; Seafield, Coventry; Lady Superintendent, Northampton; Chirurgus; Cantab., London; Lit.; Candidate; Quæstor; A Family Doctor.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Norman Kerr, London; Mr. Hancock, Cornwall; Mr. Lee, Notts; Messrs. Lee and Martin, Birmingham; Mr. Roberts, Sheffield; Messrs. Child and Co., Leeds; Mr. Oliver; Mr Macmahone, Cheltenham; Messrs. Jeary and Son, Norwich; Messrs. Warren, Bristol; Messrs. Wright and Co., Romford; Mr. Knowles, Burton-on-Trent; Messrs. Hooper and Co., London; Mr. Brown, Monmouth; Mr. Lee, Leeds; Mr. Bartlett, Romford; Major Pead, Dulwich; Mr. Beckton, London; Mr. Neal, Orkney; Mr. Montford, Bishopsgate; Mr. Taylor, Yorks; Mr. Dent, Southampton; Miss Duncan, London; Mr. Jackson, Workington; Mr. Sharpe, Cootehill; Mr. Brookes, Salop; Mrs. Jeffries, Market Harborough; Mr. Dilworth, Fermoy; Mr. Meredith, Ireland; Mr. Baron, Manchester; Mr. Jackson, Yorks; Mr. Carter, London; Dr. Clarke, Bucks; Mr. Wyatt, Bootle; Mr. Heywood, Manchester; Mr. Parker, Durham; Mr. Smith, Somerset; Dr. Dickson, Edinburgh; Dr. Wise, Walthamstow; Mr. Wormald, Manchester; Mr. McDougall, Torosay; Mr. Winkworth, Brighton; Mr. Griffiths, Lampeter; Mr. Lawford, Balham; Mr. Birch, Worthing; Mr. Waddy, Ireland; Mr. Harding, co. Cork; Mr. Collinson, Durham; Mr. Heffernan, Northampton; Dr. Thomson, Midlothian; Mr. Hornibrook, London; Messrs. Lacy and Johnston, Woolwich; Mr. David, Wales; Dr. Travell, Notts; Medicus, Bolton; Surgeon, Monmouth; Tannock, Greenock; Nurse Norah, London; A. S., London; Medicus, Bradford; Ramsgate and St. Lawrence Royal Dispensary; G. T., Bath; Dundee Royal Lunatic Asylum; J. W. P., London; L. M. R., London; Bury Dispensary Hospital; Medicus, Newcastle; O. T., London; Surgeon, Hampton Wick; Chirurgus, London; M. C. U.; A. B. C., London; Immediate Returns, London; Forceps, Stratford; Medicus, London; Portsmouth Royal Hospital; Medicus, Surrey; Infirmary, Bolton; Blaenavon Works; X., Glasgow; T. R., London; Pomphus, London; Lady Superintendent, Sheffield; M.D., London; Forceps, London; Lady Superintendent, Canterbury; G. S., London; G. J. W., Fishguard; A. C. D., London; J. M., London; M.R.C.S., Kent; Boll Hall Mill Co.; D. W. K., Dublin; Delta, London; D. A., Mansfield; M.R.C.S., Fife; M.R.C.S., Acton; Medicus, Blackburn; A. T. D., London; P., Herts; Galen, London; X. Y. Z., London; T. L., London; Bona Fide, London; M.D., King's-cross; Midwife, London; R. C. B., Newcastle; B. W. M., Brighton; Thesis, London; B. D. B., London; C. S. H., London; P. R., London; Notts General Hospital; Omega, Mon.; Doctor, Halifax; Iachin, Bristol; S. H., Birmingham; J. B., Margate; Capricorn, London; Somerset, London; S. T., Birmingham; S. H., London; Aural, London; H. W., Ipswich; A. B., Hawkhurst; Phillips; London.

Luton Times and Bedfordshire Advertiser, Lagos Observer (West Africa), Western Daily Press, Hertfordshire Mercury, Hereford Times, Windsor and Eton Express, Glasgow Herald, Herald and Weekly Free Press, Denbighshire Free Press, Surrey Advertiser, Chat (Landport), Royal Cornwall Gazette, Reading Mercury, Thanet Chronicle, Kent Coast Times, Bradford Observer, Southern Echo, Mid-Sussex Times, Newcastle Daily Journal, The Zoophilist, &c., have been received.

Medical Diary for the ensuing Week.

Monday, September 17.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M. and each day at the same hour.

CHELSEA HOSPITAL FOR WOMEN.—Operations, 2.30 P.M.; Thursday, 2.30.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; Tuesday, 2.30 P.M.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and each day in the week at the same hour.

Tuesday, September 18.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Monday at 1.30 and Thursday at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Consultations, Monday, 2.30 P.M. Skin Department, Monday and Thursday, 9.30 A.M.

Wednesday, September 19.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M.; Saturday same hour. Ophthalmic Operations, Tuesday and Thursday, 1.30 P.M. Surgical Consultations, Thursday, 1.30 P.M.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M.; Saturday, same hour.

LONDON HOSPITAL.—Operations, 2 P.M.; Thursday & Saturday, same hour.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M Skin Department, 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M., and on Saturday.

KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.; Friday, 2 P.M.; Saturday, 1 P.M.

CHILDREN'S HOSPITAL, GREAT ORMOND-STREET.—Operations, 9 A.M; Saturday, same hour.

Thursday, September 20.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M. Ophthalmic Operations Friday, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

Friday, September 21.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, September 22.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

SUBSCRIPTION.

POST FREE TO ANY PART OF THE UNITED KINGDOM.

One Year	£1 12 6	Six Months	£0 16 3
TO CHINA AND INDIA	One Year	1 16 10	
TO THE CONTINENT, COLONIES, AND UNITED STATES	Ditto	1 14 8	

Post Office Orders and Cheques should be addressed to The Publisher, THE LANCET Office, 423, Strand, London, and crossed "London and Westminster Bank, St. James's-square."

ADVERTISING.

Books and Publications (seven lines and under)	£0 5 0
Official and General Announcements	0 5 0
Trade and Miscellaneous Advertisements	0 4 6
Every additional Line	0 0 6
Front Page per Line	0 1 0
Quarter Page	1 10 0
Half a Page	2 15 0
An Entire Page	5 5 0

The Publisher cannot hold himself responsible for the return of testimonials, &c., sent to the office in reply to advertisements; copies only should be forwarded.

NOTICE.—Advertisers are requested to observe that it is contrary to the Postal Regulations to receive at Post Offices letters addressed to initials only.

An original and novel feature of "THE LANCET General Advertiser" is a special Index to Advertisements on page 2, which not only affords a ready means of finding any notice, but is in itself an *additional* advertisement.

Advertisements (to ensure insertion the same week) should be delivered at the Office not later than Wednesday, accompanied by a remittance.

Answers are now received at this Office, by special arrangement, to Advertisements appearing in THE LANCET.

Terms for Serial Insertions may be obtained of the Publisher, to whom all letters relating to Advertisements or Subscriptions should be addressed.

Advertisements are now received at all Messrs. W. H. Smith and Son's Railway Bookstalls throughout the United Kingdom and all other Advertising Agents.

Agent for the Advertisement Department in France—J. ASTIER, 66, Rue Caumartin, Paris.